

May 1920

25 Cents

THE

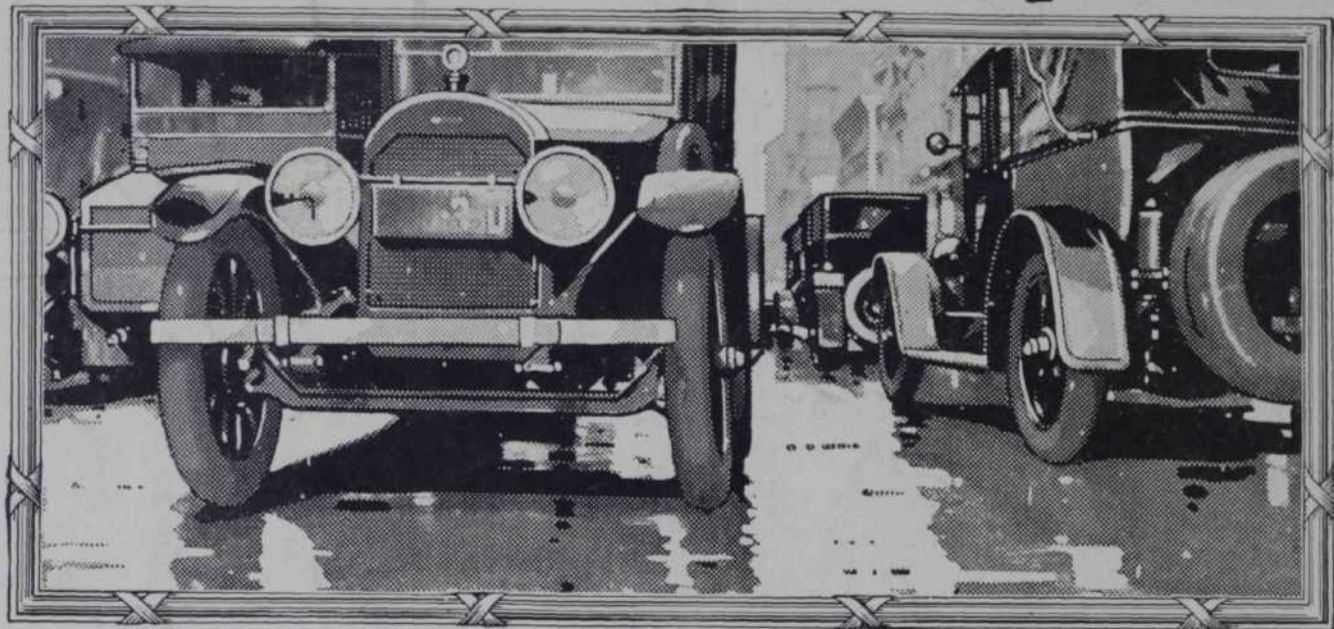
NATION'S BUSINESS



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You never get more out of your Tire than the Maker put in



STAND on a street corner some day and watch the motor cars go by. Every now and then you will see a motorist with two or three tires strapped on the back of his car, each tire of a different make.

A man afraid of his tires.

No matter how many precautions a man may take he will never get out of a tire *more* than the maker put into it.

If a tire is built to go a *limited* number of miles there is no reason why it should be expected to go any farther.

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The car in the foreground has a wheel out of line.

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* * *

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and let responsibility for quality exceed every other consideration.

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United States  Rubber Company

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"Knoeppel Organized Service"

C. E. KNOEPPEL & CO. INC.

Industrial Engineers

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NEW YORK

Note—Owing to the further development of "Knoeppel Organized Service," we have moved into larger offices at address above.

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Vol. 8

THE NATION'S BUSINESS

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MERLE THORPE, Editor and General Manager

F. S. TISDALE, Managing Editor

BEN H. LAMBE, Associate Editor

JOHN G. HANRAHAN, JR., Business Manager

GEORGE K. MYERS, Eastern Advertising Manager

VICTOR WHITLOCK, Western Advertising Manager

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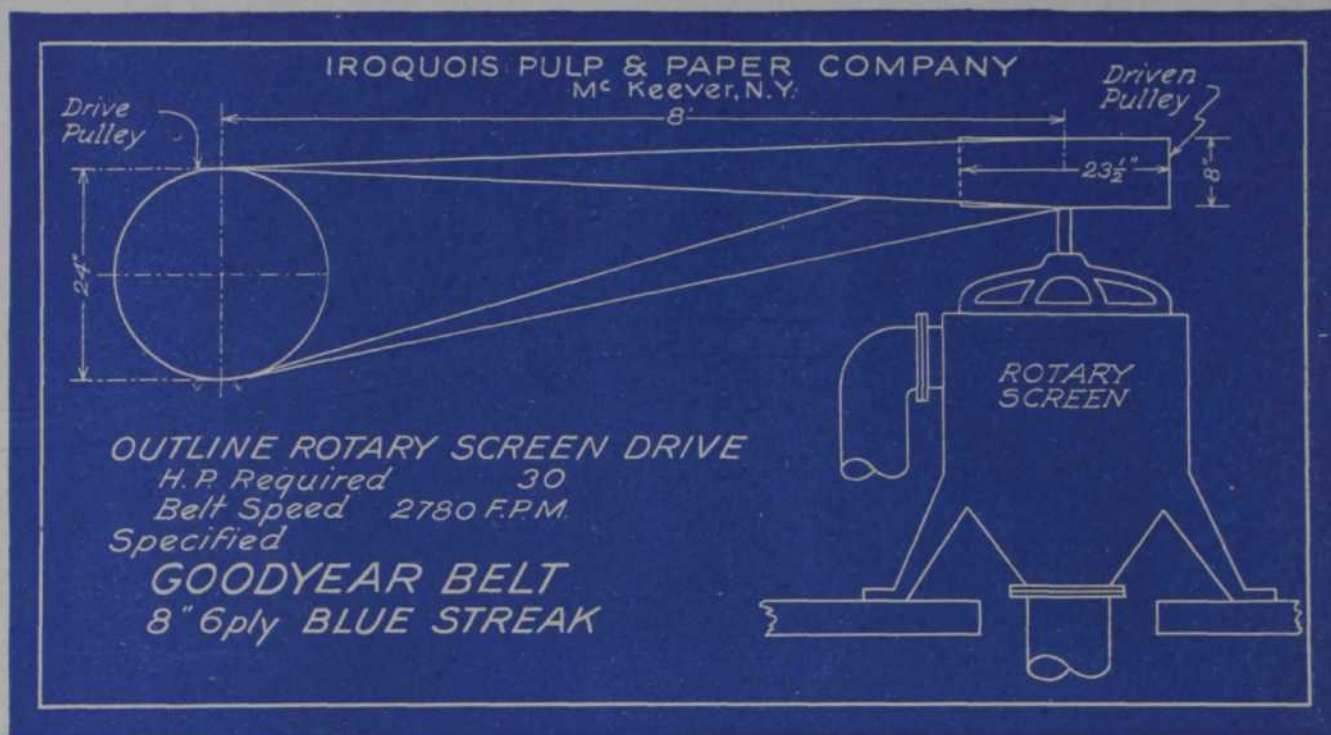
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No. 5



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20% More Production—and the G. T. M.

A quarter turn on short centers, a heavy crown pulley, and the presence of considerable moisture where the belt had to work, kept the Iroquois Pulp & Paper Company, of McKeever, New York, buying a new belt every 30 days for their rotary screen drive. That was before the G. T. M.—Goodyear Technical Man—analyzed the drive to determine what belt would do the best work and last the longest time on it.

The G. T. M. based his recommendations not on the fact that he was a Goodyear man and had belts to sell, but on his practical knowledge of belting plus a careful study of every feature of each drive. He figured in all the factors that affected belt performance and life—30 horsepower to be transmitted, a drive from a 24-inch pulley on a line shaft to a 23 1/2-inch pulley on the rotary screen, a quarter turn on short centers—only 8 feet—a speed of 2,780 feet per minute, and a heavy damp prevailing all the time.

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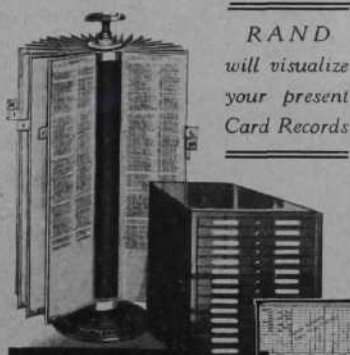
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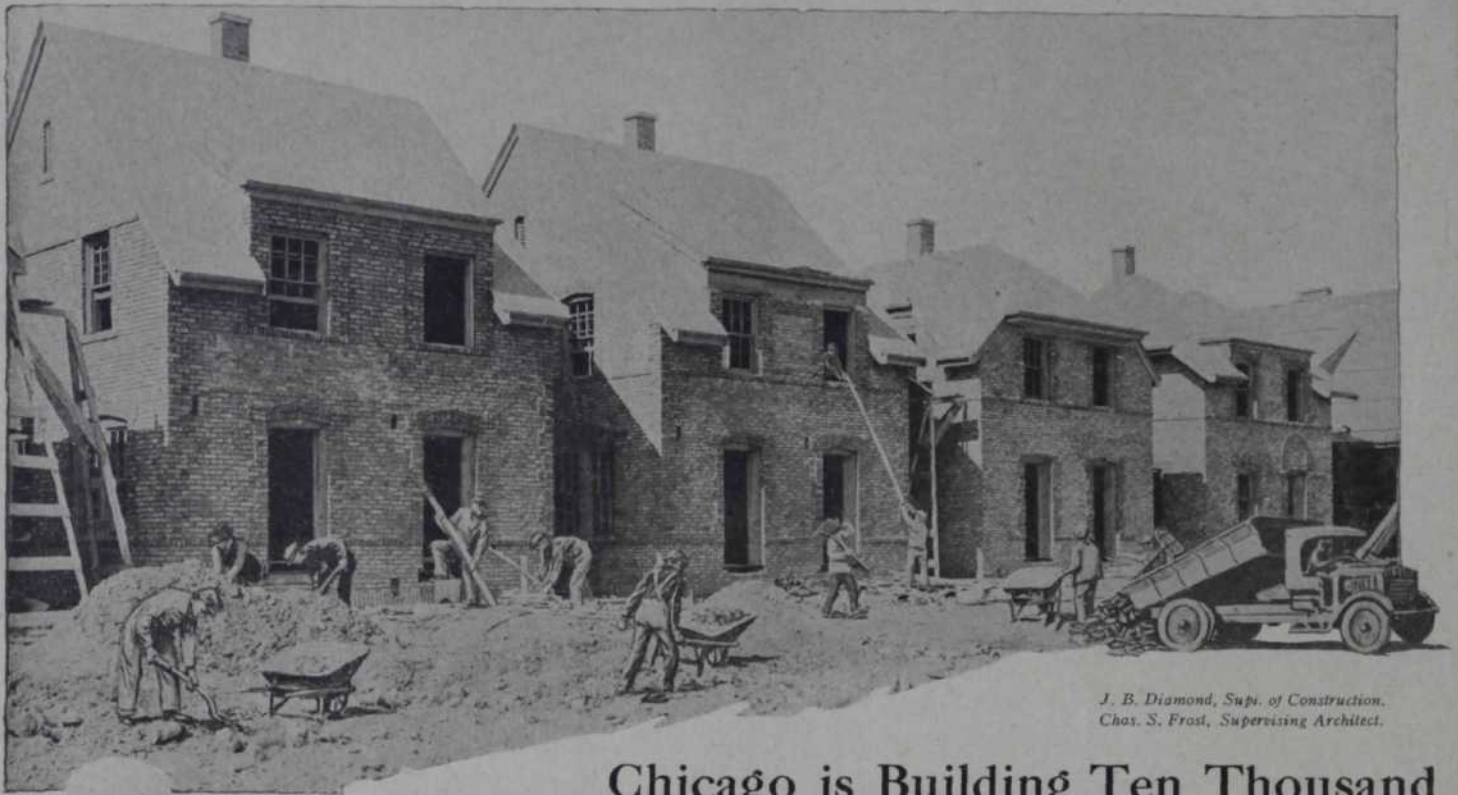
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Common Brick was selected as the basic material because it provided permanent, fire-resistive walls at lowest cost. By proper consideration of the mortar color, joint and bond, and by the use of face brick and Common Brick "clinkers" for quoins and trim, most attractive and individual wall effects are being produced.

About 30 of the houses were completed to the roof through the coldest winter Chicago has experienced in years. Even under such unfavorable conditions the actual cost has been only 40c per square foot of wall. Walls are 8 inches thick, solid brick, furred, lathed, and plastered on the inside—the dryest and warmest wall of its thickness possible to construct.

Every other type of fire-resistive and even semi-fire-resistive construction was considered and its cost carefully estimated. The nearest price rival of Common Brick figured 45c per square foot, or 12½% higher.

The experience of the Chicago Housing Association offers a suggestion of importance to every city or industrial concern with a housing problem.

This National Educational Campaign is sustained by the Common Brick Industry of America. Address the Secretary-Manager, 1310 Schofield Building, Cleveland, Ohio, U. S. A.



Obviously, those who buy these homes are people of moderate means to whom the maintenance item is vital. These houses with solid brick walls reduce upkeep to the minimum, are insured at lowest rates, and are warmer in winter and cooler in summer. Always dry, wholesome and safe.

Whether for one house or ten thousand Common Brick has no rival where Beauty is desired and Economy demanded.

Home Builders—

Send for book of newest plans, "Brick for the Average Man's Home." Shows 34 attractive houses from cozy Bungalows to eight-room Colonials, all of the modern type of fire-resistive Common Brick construction, with floor plans, interiors, details. Sent postpaid for \$1.00.

Contractors—

Write for a copy of "Brick—How to Build and Estimate." Working drawings of equipment used and details of brick construction. Complete tables for estimating labor and material quantities quickly and accurately. A complete mason contractors' guide. Enclose 25 cents to pay postage and packing.

For the Community Builder—

We shall be glad to assist housing associations, allotment builders, industrial concerns, real estate operators—all those interested in housing problems—to obtain full information regarding the comparative cost of various types of construction.

NOTE:—Send today for the book in which you are interested. You may also get helpful information from the manufacturer in your locality who stamps his brick with this trademark—your guarantee of quality.

For Beauty with Economy
build with Common Brick





THE NEW ERA

Today, the world is being engulfed in another great, purifying flood. It is a flood of strife among nations, among classes and among men. Farsighted business men are preparing, as did Noah, looking forward to a New Era—a world refined of selfishness, greed, suspicion and envy.

Right preparation demands adherence to Truth and Justice—the basic laws of right business management. L. V. ESTES INCORPORATED is a professional organization whose function is to apply those principles as an aid to modern business, and whose policy is to perform that function with competence, reliability, and energy.

The New Era will bring new relationships between employer and employee, new methods of management, new standards of production. The Estes policy is to promote harmonious relationships *now*, to develop the individuality of workmen, stimulate their ambition and secure their co-operation.

The results of this service, in increased production, lowered costs and lessened waste, insure to Capital a fair return, to Labor a fair reward and to the Public a fair price.

An interesting phase of the Estes policy is treated comprehensively in a booklet, "Human Relations in Industry," which will be mailed on request to anyone interested.

Number Four—
The Policy of Estes
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METHODS AND PROCESSES



COSTS AND ACCOUNTING • APPRAISALS
INDUSTRIAL RELATIONS

For Higher Standards of Business Management



The unprepossessing waste of Greenwich Point, July 25, 1918

Planned for Victory— Completed for World Trade Expansion

Early in the war, the Construction Division of the United States Army planned army supply bases at five Atlantic Ports. Philadelphia was logically one of these. The great manufacturing district round about the Quaker City supplied more munitions, coal, clothing, etc. than any other. Here must be a terminal with pier, dock and warehouse facilities sufficient to handle a tremendous, ever-growing volume of war material.

There was no precedent to follow, for it dwarfed anything of its kind ever before attempted. It is significant that they called in Day & Zimmermann, Inc. as Supervising Engineers.

The estimated cost was comparable to the price paid for the Philippines. There were millions of cubic yards of river bed to be dredged. More than fifty thousand piles were driven. One pier alone covered ten acres in ground-floor area. It was a seven mile walk around the boundaries of the operation. Other statistical figures are commensurate. These statements suggest its proportions.

The Armistice came. It brought revisions in plans. But the project has been pushed as a part of the movement to make the port of Philadelphia second to none.

This is another example of Day & Zimmermann service. Regardless of the scope of the operation, we offer the same degree of service to all clients. Our advice is expert—investigation thorough—and our planning is sound. We have an interesting story in detail of this project which will be sent upon request.

DAY & ZIMMERMANN, INC.

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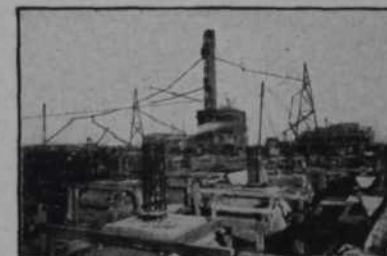
The Philadelphia Quartermaster Terminal completed January 12, 1920



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"Pier C" Taking Shape



Foundation Piers and Concrete Equipment



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ROYAL



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MORE than 5000 White Trucks are used by concerns whose sole business is motor truck transportation. They are operated on established routes—express, freight, passenger—in every part of the country.

In many cities White Trucks are the backbone of the largest motor transport fleets. To farms and villages, to mining and lumber camps and oil fields, White Trucks bring rapid transit and quick communication. In our great National Parks they are the standard equipment for passenger and freight service.

In this service, the mettle of a truck shows unmistakably. Steady operation on exacting schedules, over all

kinds of roads in all kinds of weather, is an acid test of endurance. The trucks' *earning power* is the only source of income. Every cent of operating cost is a direct charge against profits. None but the best trucks can do the work; only the most economical can *pay*.

Owners in this field emphasize the "on time" dependability of White Trucks under all conditions, and their low cost of operation year after year. Mileage records are frequent, citing 100,000 to 300,000 miles, the trucks still doing a full day's work. White Trucks go on working and *earning* long after the investment has been charged off the books. They "do the most work for the least money."

The following are some of the representative concerns who operate large White fleets in motor transport service. These fifty companies own a total of more than 1500 White Trucks.

American Railway Express Co.
A. L. Ammen Transportation Co.
Akron Storage & Contracting Co.
Anchor Cartage Co.
Atlanta Baggage & Cab Co.
Baltimore Transit Co.
Black & White and Town Taxicab
Boulevard Transportation Co.
Canton Storage & Transfer Co.
Cleveland-Akron Bus Line Co.
Cleveland Transfer Co.
Club Cab Corporation
Columbus Transfer Co.
Emerick Motor Bus Co.
Owen H. Fay Livery Co.
Fenway Garage Co.
Glacier Park Transportation Co.

Kennicott-Patterson Transfer Co.
A. C. Marshall Co.
Mesaba Transportation Co.
C. W. Miller Transfer Co.
H. W. Mollenauer & Brother
Motor Terminals Co.
Municipal Railway
Omaha Taxicab Co.
Frank Parmelee Co.
Peninsula Rapid Transit Co.
Pikes Peak Auto Co.
Progressive Transfer Co.
Pullman Taxicab Service Co.
Quaker City Cab Co.
P. Reardon, Inc.
Rocky Mountain Parks Transp. Co.

Salt Lake Transportation Co.
San Francisco Drayage Co.
Dennis Sheen Transfer Co.
Smith & Hicks, Inc.
Stewart Taxi Service Co.
Tacoma Transit Co.
Terminal Taxicab Co.
Twin City Motor Bus Co.
Union Transfer Co.
White Bus Line, Inc.
White Star Auto Line
White Taxicab Co.
White Transit Co., Inc.
Western Auto Stage Co.
Yellowstone Park Transp. Co.
Yosemite National Park Co.
Zumstein Taxicab Co.

THE WHITE COMPANY, *Cleveland*

THE NATION'S BUSINESS

A Magazine for Commerce Business Men

VOL. 8, NUMBER 5

MAY, 1920

"Philanthropy?—Rot!"

These manufacturers decided that it was simply good business to house employes comfortably rather than let them live in tenements where every sight and sound encouraged restlessness

Written by a man successful in his profession and known throughout the country as an authority on business. His name is withheld for reasons that will be evident when you read the story

I WAS BORN in a tenement. My parents were immigrants. I give as my view of one of the prime causes of unrest in America, based on experience, not bitter or exceptional, but rather the usual. Even if you do not agree with me, it is well to know what the other side thinks or how it feels. I think I know the heart and soul of the tenement.

It has doubtless been a shock to you, along with a vast majority of Americans, to discover how widespread is the opposition to many of the things in the American institution, how much there is of socialism, or Bolshevism, or I. W. W.-ism, or whatever you may term it in its various phases. You cannot understand why, in this great land of liberty and opportunity, there should be such evidences of discontent, of bitterness and of violence as have been witnessed east and west, and north and south. To many it seems the basest ingratitude that people, who came to this country to escape from intolerable conditions in Europe, should not appreciate the freedom, the blessings and the higher rewards open to them in America.

We had no real problem in relation to immigration until the last quarter of a century. Until then the bulk of the inflowing masses was made up of English, Irish, Scotch, Germans, Dutch or Scandinavians, people who were racially akin to the stock that made the republic and who were readily assimilated. Until then, too, a fair proportion of the immigration was for the farm.

In the last 100 years 33,000,000 immigrants



© Underwood & Underwood.

Five years without building, five years of movement toward the cities have compressed further such districts as this street on New York's East Side. High rents force the tenement family either to take in another family or, often, two sets of sweat-shop roomers. Those who work in the daytime sleep at night; the night workers sleep during the day; the family sleeps in between. Any wonder that the tenements are restless?

have come to America. Of this vast army 11,791,863, or 35 per cent, arrived in the twelve years, 1903 to 1914, inclusive. The majority of these were Italians, Greeks, Russians, Slovenes, Finns, Poles, Portuguese, and Asiatics.

Can you visualize such a mass of humanity as poured into the country in those twelve years? It is doubtful if living man ever saw a procession in which 100,000 men participated. It would take nearly three months for that army of immigrants, marching 100,000 a day, to pass a given point.

Only an immigrant can know the illusions under which an immigrant comes to America. The more ignorant, the deeper and the wilder

the illusion. Steeped in the prejudices and hatreds handed down by centuries of wrong or oppression in Europe he comes here with the most absurd and fantastic beliefs. Every one is free and equal here. Wages are fabulous. Fortune, if not fame, is within the reach of all. The riches of this new world are beyond belief.

And what does the immigrant find?

New York, the great gateway to the new world, has 101,000 structures officially classed as tenements. Nowhere on earth are people so crowded as in the "foreign" sections of that city. There are hundreds of double-decker tenements in which there are from 40 to 48 apartments. But more than 40 or 48 families live in those structures, for rents are so high that, to meet them, families have to "double up." The families that do not lessen the rent burden in

that way infrequently take lodgers—sweat-shop workers. Those of the sweat-shop workers who labor at night sleep in the tenement in the day. Those who work in the day occupy the beds at night. The members of the family sleep between times.

Visit Essex Street, Delancey Street, Ludlow Street, Allen Street, New York, if you wish to see human beings herded as hogs or cattle are in the stockyards of Chicago or Omaha. Then go to another quarter, say, Mulberry or Sullivan or MacDougal, and see those of

another race packed in like sardines, and go to lower Greenwich or Washington and you'll find enough Asians in a few blocks to populate a fair-sized city.

There are tenements in New York that were branded by a commission headed by John Jacob Astor the first, seventy-five years ago, as so foul as to be a disgrace to a civilized people. Those tenements are still in use and with the grime and horror of seventy-five years more of occupancy piled upon that which appalled John Jacob Astor and his associates.

The house in which I was born was old when I came into the world fifty-six years ago. It was a tenement then and is a tenement now. I do not want to suggest that all the tenements of New York and Chicago or any great American city are bad or that any considerable percentage approaches in foulness the ones in Sullivan or Mott or Washington or Essex Streets, New York, but, just the same, the American tenement is a disgrace to this day and generation.

I have lived in a coal-mine district in the Middle West and a textile mill town in New England and found conditions approximating those of New York. There is the same herding, the same horror and depressing outlook.

What of the immigrant with all his fanciful ideas of America who views this Eldorado amid such surroundings? It may be true, and it probably is true, that the immigration of recent times is made up of the scum of Europe. Surely it is an unlovely lot, not one over which to rhapsodize, but it is here, and it is here to remain. All the ships that sail the seas could not transport it back to Europe in a year even if such an undertaking were thinkable. We used to pride ourselves that America was the melting pot of nations, but America suffers today from the worst case of national indigestion in the world's history.

Wretchedly as we have provided for the immigrant in the matter of housing, we have given the lie to the claim that this is a land of freedom, one in which all men are equal. We consider ourselves superior to the immigrant.

Nicknames for the Newcomer

PROBABLY we are, but in our arrogance we show our contempt for him in many ways. The Jew we call derisively a "Kike," the Italian a "Wop," or "Dogs," the Irishman a "Mick," the Scandinavian a "Squarehead." We forget we are all descendants of immigrants.

We arrogate to ourselves a right to judge harshly our inferiors and never consider our shortcomings. We have no tolerance for the immigrant, because he knows little of the bathtub. We forget that it is little more than seventy years since the first bathtub was installed in America, and that it was decried by the medical profession as a menace

to health. We forget, too, that when one was installed in the White House the President who had the temerity to order it put in was denounced for aping the silly, effeminate forms of the British fops.

We never appreciate that, to the immigrant, the living symbol of American law and American justice and American institutions is the policeman—the Magistrate of the Street. Yet we choose our policemen for our tenement districts without any regard for their qualifications for one of the most serious problems that confronts us. The vast majority of our policemen in our tenement districts do not know the language

of the people over whom they rule, have little or no sympathy with them, and make them feel they are unwelcome.

No one could play a larger part

Indeed, I am trying to under-state, and what I have just said has been aggravated by the war. For five or more years there has been no construction of dwellings worthy of consideration. We have had five years of deterioration in buildings, and five years of increase in population, and five years of the steady drift from the farm to the city.

The Shortage in Homes

IN New York it is stated officially that there is a shortage of 100,000 apartments. The Housing Commission of Philadelphia estimates that there is a shortage from 20,000 to 25,000 houses. There hardly is a city in America that is without a housing problem. Landlords have taken advantage of the opportunity to raise rents as never before. There are instances of rents having been increased 200 per cent. At a meeting of the real estate owners in New York, called to oppose legislation to restrict rent increases, there were demands for all the increases the situation in all its acuteness would permit and declarations that they wanted all they could get.

Man by nature is predatory. In many cities the real estate market practically is controlled by a class wholly unconscionable and wholly unfeeling.

How much of the unrest, the strikes, the bitterness manifested in various forms can you trace to this cause piled upon the profiteering in food, in clothes, in all forms that touch the public most hurtfully and against which the public is helpless except to protest by acts that seem destructive or abortive?

In New York the fire chief has ordered a survey of the city by the fire captains to report all the lofts in their precincts into which the chattels of the many thousands, expected to be dispossessed on May 1, may be placed. The city proposes to care for the household goods of the evicted, but the homeless must search as best they can for shelter.

In Philadelphia there was a riot when a landlord dispossessed a father 78 years old and his wife 74 years old, whose son, a wounded soldier, is still in the hospital.

Construction work the nation over is halted because material is at such a price as to make builders question the worth of embarking on such enterprises now. They might take chances

on the material costs if there were any surety as to labor costs, but never was labor more unreasonable and never were strikes called more frequently. There is neither stability in material nor in labor. In its blindness labor sees in the shortage of houses and the shortage of labor itself, an opportunity to wring concessions in the way of wages and hours as never before, regardless of the fact that it is punishing itself and punishing the nation, and not the builder, by its course.

The National Government has taken notice of the situation to the extent of offering to provide army tents for homeless people to live in this summer. There is danger, grave danger, in this. You have had an illustration of what may happen by what happened in our army camps in this country in the time of the Spanish-American War. Lack of proper sanitation caused the loss of more lives in the camps than were lost through



© Paul Thompson.

A tenement woman going home from her shopping with a box that will do for stove wood. It is she who spends the money for the family, from her the worker gets a nightly recital of all the wrongs—fancied and real—of the "profiteers" against his household. Add to this source of discontent the nagging and bitterness between families too closely crowded together, and you have rich soil for propagating the worst forms of unrest.

in the Americanization of the immigrant than the policeman, if he were fitted to be the friend, the counsellor, the big brother of the newcomer in this strange land.

When I was a boy no one had greater terror to me than the policeman. At his approach the cry went forth, "Cheese it, the Cop," and we fled.

Do you appreciate what it means when in the mind of the child there is planted this idea that constituted authority, represented by the minion of the law, is unfriendly?

And yet, why should we flee? Childhood is the springtime of life. Play is as necessary to the child as food or drink if the child is to develop normally. In the great hives we call cities the child lives under thralls which few appreciate to the full and which few try to rectify. We raise our children under unnatural conditions and wonder why they rebel.

The picture I have given is not overdrawn.

Spanish shot and shell and bayonet in combat on land and sea. And those camps were under military discipline.

How much of the discontent of labor, either rough labor or that of the salaried class, can be ascribed to bad housing or unjust costly housing? Few employers know or have given a thought to the question, and yet I, for one, think it is one of the principal causes. It is estimated that 85 per cent of the wages of labor are dispensed by the housewife. If the home is not attractive, the man seeks some place more attractive. Formerly it was the saloon, which was called the poor man's club. It is an indictment of society that such was the case. Now the worker has not his former club. In the present situation he finds the home no more attractive than before. He finds rents mounting at a rate that appalls him. He hears from his wife constant reports of higher and higher prices for necessities. And back of the new complaints is the woman's life-old background of a sordid, unsanitary, miserable hovel. The source of unrest? Let economists and social philosophers seek no further. Its roots lie in the home, with its garbage pail in the single room, the lugging of water up flights of stairs, the bickerings on the landings, the unlovely outlook on a court filled with flapping clothes and nauseous smells.

No Chance for Contentment

IS it a wonder that the husband is made dissatisfied with the existing order? He has no way to protest, except through his boss, and, to him, through his union. He makes more and more demands.

Where is it going to end? There is no immediate prospect of construction of houses, or, if they are built, of rentals at reasonable prices. The "vicious circle" of landlord, of food man, of union and of builder and supplier swings more and more to higher levels.

Through it all the employer has been blind to his duty. The employer, as a rule, thinks his province is only in his shop. He considers his duty with the payment to his men of their wages. He leaves his men to be the prey of politician and profiteer. If the city or town government is bad, it is none of his business. If rents go kiting, it is not his fault. If food and clothing prices vault to heights undreamt of, what does it signify to him?

He rarely, if ever, appreciates that he can do a great and protective work for his force that will be of profit to him, and never more than now. Anything that affects his men adversely is sure to be visited upon him. Anything that benefits them will benefit him directly or indirectly. He must learn this lesson and act on it if he is to profit.

Housing, proper housing, plays a far greater part in labor contentment, in health, in productive and in general welfare than is appreciated.

Manufacturers who are wise know that clear, sanitary, cheerful shops make for good workmen and good workmanship. It is the boast of the Miller Lock Company that its shop is more attractive and more pleasant than any home in which its workers live. It boasts, too, that its example of a cheerful shop has led to more cheerful homes.

One of the big steel companies went through the recent great strike

period in the steel industry without one of its force leaving its plants or without threat of strike. The men employed by that company have model homes built by the company and rented or sold on a fair and honest basis. The head of that company told me his production was 135 per cent as compared with an estimate of 100 per cent for the United States Steel Corporation. That steel magnate employs perhaps 10,000 men and has 23 nationalities represented in his works. He pays more attention to the human elements, to housing, welfare, protective lines, recreation, helpfulness and man building than to steel making. He can employ experts to look after the manufacturing end of his business, and he does. He has prospered greatly.

The head of a great cotton mill does likewise. His employees cannot be lured away from him, although his neighboring mill men suffer much from labor migration and labor trouble.

I have talked with both of these large employers. To one of them I said, "You're a philanthropist."

"Philanthropy hell," he replied. "It's business."

The steel man is George M. Verity, of the American Rolling Mill Co., of Middletown, Ohio.

The textile man is Fuller E. Calloway, of the Unity Mills, of La Grange, Ga.

If it pays to protect the worker, why not do it? If the present system leads to unrest, why not change the system to a better and a fairer one? If the present method checks Americanization of the foreigner in this country, why not introduce a method that promotes Americanization of the immigrant and stabilizes all kinds and characters of workers?

If homes cost too much and are unsatisfactory, why not endeavor, in whatever new building is done, to keep costs down as much as possible and at the same time give decent housing to the workers?

Building costs never will be so low as before the war, but it would be criminal if we built houses so poor as we did in former days.

The costs before the war were unnecessarily high. The builder had to pay stiff rates for the money he got to finance his undertakings. If he was building on speculation he got the highest possible price when he disposed of his structures. The purchaser charged all the rent the property would bring. It all was transferred to the renter in the final analysis.

Incidentally in not a few cities there was

graft. To get a set of plans through the building department promptly, the slipping of \$15 or \$25 or \$50 to the proper individual was necessary. Otherwise there were causes found for delay. Inspectors of every kind and character were "reasonable" if their itching palms got proper salve.

In the final analysis the renter or purchaser paid the bill.

Everything in the form of bad city government, of graft in state or national government, is expressed in a charge through tax or rent upon the worker.

The province of the employee is to work for decency and honesty in politics.

The province of the employer is to help reduce the cost of housing, and, at the same time, improve housing for the workers.

It can be done. It has been done in various parts of the country. It has been done in a large way in Philadelphia by the Girard estate. This estate has built 489 dwellings that are model structures of their kind. They are admirably built. Every reasonable accessory is incorporated into each house. There are no coal holes or ash piles or rubbish piles. The estate provides heat from a central power station. Every house is electrically lighted. All cooking is done on gas or electric ranges. The estate furnishes a rubbish bag which hangs on the rear porch. Into this the householder puts the refuse. There is a plenitude of hot water night and day. There are repairmen at the estate office to fix anything that requires attention. The cellars are large. The upkeep is perfect. The streets are neat. Men hired by the estate spray the trees and trim the lawns and look after the flower beds. There is a park and a children's playground. The buildings are in twenty or more designs. There are plenty of rooms and every necessary convenience.

The Rent Scale

THE rent is on a sliding scale and is determined by the cost to the estate. In summer it is lower than in winter because the household uses less light and heat.

No tenant has coal bill, repair bill, light bill or tax to pay. The monthly bill embraces all. And it is about one-third less than similar houses elsewhere.

The estate gauges the rent so that it gets 4½ per cent on its investment—no more and no less.

There are 1,000 applicants on the waiting list eager to get into these houses.

Something like this might be well for employers to consider singly where they have large forces, or cooperatively where the forces are small.

Here you have many of the charges eliminated that go to make high cost of houses, the cost of financing, the profits of middlemen, be they real estate speculators or others. There is economy in fuel, in light, in mass production.

The employer must consider the housing question from an economic viewpoint. It is going to be a more pressing problem the longer he evades it.

The way to contentment in labor is not wholly through housing, but it is one of the ways. It is one of the ways to add to men's comfort, health, safety and good citizenship.

And it is one of the ways to lessen the plagues of the employer today.



Courtesy the American Rolling Mill Co.

Exit Percy and Ferdie

Certain of our cities are seeking to raise the important service of retail salesmanship from the scorn in which it has been held to the dignity of a profession

By THEODORE M. KNAPPEN

AS a nation, we work first and think afterwards. For instance, about three-fifths of the men and women employed in commercial pursuits in cities are to be found in stores; yet until recently it never occurred to anybody to use the public schools and universities to train men and women for leadership or for service in the rank and file of the great merchandising army.

All the educational attention that was given to fitting people for the commercial life was concentrated on the clerical side. Swarms of bookkeepers and stenographers were trained, more or less, in public and private schools, but nobody did anything for the improvement of the far larger and more lucrative field of activity. More people in cities are working in stores than in any other occupation.

Most merchants exhibited the same lack of thought on the subject. They perfected everything connected with collecting and distributing goods, except the actual selling agencies. Where they spent their money they were strong; where they took it in they were weak. Yet every other department of merchandising leads up to the sales counter. It is the tool which utilizes the power; it is the final expression of the merchant's purpose and function.

The Weak Link

OUR great stores have been like restaurants with good cooks and excellent foods but with inefficient waiters. Organized for superior service in every respect, but at the point of delivery they have fallen short of that final excellence that the public had a right to expect of them. The merchants provided good pay and opportunities for their selling help, but when that failed to get results, they accepted inferior personnel and slovenly selling methods as inescapable fate.

The psychology of the situation seemed to be against them. There is a general prejudice against sales positions not only on the part of boys and girls about to enter business but also on the part of their parents. Clerical positions are considered "nicer" and of higher social standing.

"The Percy and Ferdie of ballroom fame reflected the male attitude toward retail selling," says Prof. Lee Galloway, of the Department of Business Administration of New York University. "The feminine attitude toward the position of a salesgirl was reflected in the conduct depicted by a movie heroine posing as a stenographer, always marrying the boss and forever afterwards riding in a limousine; while the friendless salesgirl, continually fighting against the cravings of an empty stomach, finally winds up in Sing Sing with a two-year sentence, through the arts of a conscienceless manager, who made the mistake of thinking she was a blond when in reality she was a perfect brunette by disposition."

Merchants are at last beginning to consider whether they cannot make the sales person take the star heroic roles and become more estimable than the stenographer in the minds of boys and girls; they are beginning to think and investigate, and they are turning to the schools and colleges for help in the scientific

and comprehensive solution of the sales personnel problem.

The great department stores of Pittsburgh have taken the lead in this new departure, though Boston and New York, as well as other cities, are beginning to celebrate. One of the leading department store proprietors of Pittsburgh directed the attention of the faculty of the Carnegie Institute of Technology to the low estate of department store selling personnel, and to the surprising fact that public institutions of learning were doing nothing for the vocational training of boys and girls who would make up in the future far the larger part of the population engaged in commercial pursuits.

With its fondness for unbeaten paths, the Institute lost no time in organizing, with the assistance of the seven chief department stores of Pittsburgh, a Research Bureau for Retail Training. The merchants were delighted, and they proved it by subscribing \$160,000 for the maintenance of the bureau for a period of five years and by taking an active part in its organization and direction.

The city high schools joined in the enterprise, with the result that in Pittsburgh the schools are now training boys and girls to enter retail merchandising at the same time that the Institute is training men and women to be teachers of this subject in the stores themselves as well as in the schools. A desirable by-product of the merchandising course in the high schools is that boys and girls are not leaving school as soon as they were. They are getting more of a cultural education as well as some vocational training.

The merchandising courses are offered only in the junior or senior years, thus luring the boys and girls on through the general education program. While they learn the theory of merchandising and those general facts and principles that they might be years in picking up while actually at work in the daily rut of a small job, they get practical experience two days a week, Fridays and Saturdays, the co-operating stores paying them \$2.00 a day for their time—if they are worth their keep. The unfit are early eliminated.

Having completed the course, the students are received into the seven subscribing stores at \$15.00 a week, which is more than the beginning pay of stenographers and clerks.

Some of them will doubtless become so interested that they will go on through college and take the graduate course of the bureau.

For men and women who are already making good in the stores, but wish to broaden their knowledge, the bureau opens its graduate teachers' training course, even though they are without a college degree, provided the mental tests show that they have the requisite natural ability.

"We are trying, therefore, a fundamental experiment in training by admitting to this course those of maturity and experience in stores, if they show sufficiently high records in tested general ability," says Dr. J. B. Miner, associate professor of education in the Institute and executive secretary of the Research Bureau for Retail Training. "I can imagine the old academically minded educator throwing up his hands in holy horror at this apparent affront to ancient ideas of educational standards. We should have a good deal of sympathy with his point of view, if we did not believe that we are guarding what was best in the old tradition by substituting for academic learning another even more fundamental standard of high living."

Using the War Test

ATHOROUGH trying out of general ability tests by our division of applied psychology for the past four years and by the War Department has made us ready to substitute a standard of general capacity equaled only by the upper third of entering students in our colleges as a means of opening this work to a limited group of business people who are not college graduates, but have exceptionally high ability."

Those who are admitted to this course take a full academic year's work in instruction in store organization, employment and labor conditions, merchandising, teaching, and business hygiene. In addition there are unusually thorough courses in statistics and in the development of the new science of test technique. Educational and scientific points of view in relation to human activity, human development and applied science in the personnel field are treated. The course aims to combine technical skill for personnel training in retailing with the best educational tendencies of today.

The registrants for the course—most of whom are college graduates—get practical experience in the stores just as the high school students do, so that when their course is completed their theory is not out of proportion to their experience. They know stores, not as they are in books, but as they are in fact. Those of them who are college graduates receive diplomas in personnel research and administration. Some of the students specialize in research work, thus preparing themselves to be the internal critics and reconstructors of personnel and administration.

Taken as a whole it may be said that the bureau is putting science and scientific training into merchandising, thus making the calling more of a profession and less of an occupation. The mercantile life is presented as one of social and economic service.



The Crusade of the Young Men

It may be that Japan's encroachment in Shantung is a blessing in disguise; the students who organized the great boycott have also given to China a realization of nationalism

By RICHARD SPILLANE

BECAUSE Japan took to western civilization so readily and climbed to world prominence in commerce, industry and other lines with such amazing rapidity while China, which had been in touch with Europe and the western hemisphere so much longer, gave little or no response to that influence, the idea is rooted that the Japanese are unusually adaptable while it is impossible, almost, for the Chinese to change from their centuries of old habits. The Japanese are remarkably adaptable. The Chinese are wedded to custom. But the Japanese are not so clever or the Chinese so unchangeable as generally believed.

There are explanations which few persons have come to consider in relation to these two peoples. Primarily there is one that may be termed geographical. Insular people, or those whose lives depend mostly on maritime pursuits, have been the great adventurers of the world and, consequently, more subject to change by outside contact. Japan is a group of islands. China is a huge territory whose inhabitants are wedded to the soil. What touched China touched only the fringe bordering on the sea. What touched Japan had not to penetrate far until it affected all.

But there were other reasons. Japan has had leadership, practically nationalism, throughout the ages. China has had none.

Unwittingly Japan has done more in the last year to develop a spirit of nationalism and during that time to arouse China than can be ascribed to all the acts of Caucasian aggression or effort in the past century. As an empire China was inert, sluggish, purposeless, desirous only of being left alone. There was no leadership, none of that enterprise that welds a people into a mighty force.

And China Remained Calm!

THE phlegmatic calm with which the seizure of its ports by Europeans was accepted illustrates this fully. Imagine America submitting to the taking over of New York, Boston, New Orleans, San Francisco, Seattle and other portals by foreign powers, each jealous of the other and each actuated by no motive but to promote its own selfish ends.

Julean Arnold, who has been United States commercial attaché at Peking for seventeen years, says all China needs for its development is transportation. It needs one thing more—nationalization. That Japan has speeded. It is not unlikely that history will date the regeneration of China to what we term the Shantung affair.

It may seem peculiar to the occidental person that China should accept with seeming complacency the appropriation of Tsing-tao and the practical absorption of control of Shantung by Germany and be profoundly stirred by its cession to Japan. But the China of the Boxer rebellion period and the China of today are different. The China of the Boxer period was inert. The China of

The Tobacco Man Was There!

CHARLES FARNHAM, the engineer, wanted to go farther into the interior of China than any white man had ever been. He started up a great river. He kept going until the great river became a small one and farther still until it became a creek, and on until it became a brook so shallow that progress was difficult. The natives far behind had told him that he was farther from the coast than any white man had ever gone.

Certain that he had attained his desire, Farnham told the boatman to tie up for the night beside a small barge at the bank. As he approached this barge he discovered to his amazement a white man stretched out under the deck awning. Farnham asked him what he was doing so far inland.

"Oh," was the answer, "I'm selling American cigarettes."

There is meat for thought in these stories by Mr. Spillane. The Standard Oil and the British-American Tobacco Company have no copyright on the methods by which they developed this vast field.—THE EDITOR.

today is beginning to think, to move, to act. "China for the Chinese" is a living message throughout a great portion of the land today. It has not reached the length and breadth of the country, but it is spreading as nothing ever did before within the confines of the empire.

Within the province of Shantung live half as many persons as in all Japan. Within Shantung is mineral wealth in coal, iron, gold greater than in all Japan, and with it an agricultural wealth of wheat, cotton, sugar, tobacco, hemp, fruits, peanuts, silk and vegetables. Few parts of China have more established industries of considerable size. And with this material wealth there is a wealth of traditions, for in Shantung are most of the great shrines of China.

With the capture of Tsing-tao the Japanese gave promise of restoring Shantung to China. No date was set. The Japanese are peculiar. The peace plenipotentiaries at Paris saw fit to confirm Japan's title as given by the Germans regardless of Japan's pledge. Why not? Why should China which always had been yielding, if not supine, protest. But China did protest. China not only protested but refused to accept the decision of the Peace Conference. It appealed to America for support and it spread the news through China.

And then the world was treated to one of the most extraordinary exhibitions of national awakening in all history.

In the period of the war Japan had opportunity for commercial expansion in China as never before. With the markets of Europe and America cut off, or practically cut off, Japan's trade with China increased nearly tenfold. All the goods or nearly all the goods previously drawn from the Occident China drew from her Oriental neighbor. A wise people might have been content with this and

used the great advantage this situation presented for the establishment of a lasting commerce, but Japan has visions or aspirations for world power or at least complete dominance in Asia.

Japan, overcrowded today, must spread out or be cramped or crippled. Unable to grow enough food stuff within her own domains except in seasons of exceptionally good harvests, she has the ever-present danger of famine in lean years. Jealous of Caucasian influence in the Far East she aspires to control of Asia. Gradually and persistently she is working to gain more and more of territorial foothold on the mainland with the purpose ultimately of dominating the East.

In all this Japan simply is following historical precedent. It was so in Europe in other days.

But an amazing thing happened in China when it became clear that it was the purpose of Japan to hold Shantung and, after Shantung, perhaps find pretext for grasping something more and then something more. In every port of China and in not a few of the interior cities, bands of young men, apparently without direction of a central body but all animated by the same impulse, went from store to store, from warehouse to warehouse, from factory to factory and, wherever they found Japanese material in raw or finished state they told the story of Shantung and requested the merchant or manufacturer not to handle Japanese goods. On busy streets and in residential districts they addressed the populace and besought them not to purchase Japanese made articles or articles made of Japanese goods.

To Prison for a Principle

DAY after day they followed this program. In some instances the hot-headed went so far as to seize and destroy Japanese goods. These offenders were arrested and accepted imprisonment with stoic unconcern. In Shantung, where the Japanese were in control and when a Chinese mercenary was in command of the troops policing the province, thousands of the boycotters were flogged in public, but the only result was that their places were filled promptly by girls.

This probably will be classed as one of the most remarkable boycotts ever recorded. It is estimated that 1,000,000 young men and young women are active workers in the movement. I asked Julean Arnold if the estimate was too high. He said it was not.

The customs reports of the principal Chinese ports bear evidence of how effective the boycott has been. In some instances there has been a decline of 90 per cent in Japanese imports. The average would probably be a decline of between 50 and 60. This is from the peak attained by Japan in the war period. The decline would be more pronounced but for the skill with which many of the leading merchants of the big seaports have disguised their imports or succeeded in smuggling Japanese goods into the interior.

What is of great consequence commercially is that throughout a large portion of China, and particularly the district embracing one-third of the whole territory—that is, the section back of the seaboard—the word has spread that Japan's purpose is to dominate China and that in no way can the Chinese do more to defeat Japan's aim than by refusing to buy Japanese goods. It will take many, many years for Japan to overcome this movement and it is doubtful if she ever will succeed.

And who are the boycotters? The testimony is that they all are young and all are of the student class. They are the pupils or the graduates of the innumerable schools that have been established in China by the foreign missions or have been outcrops of missionary effort. Added to these are the many thousands of young Chinese who have been educated in Europe and America and who have gone back and taken up school work in their native land. They represent the new China, the China that means transportation, nationalism, development.

No part of the world offers more of opportunity for development. In one province alone there is estimated to be coal in quantity equal to what would be the world's consumption in 1,000 years according to present-day needs. In a dozen provinces there are beds of iron ore untouched. Of copper, quicksilver, antimony, lead, zinc, manganese, tin, kasslin, oil, potash, nickel, gold, spelter, tungsten there are innumerable fields untouched.

Transportation will unlock the treasures buried in the earth. To the power of coal will be added the hydro-electric power of many streams that now spend their energy without serving man.

Cheap Carriers Cost Most

IT is idle to talk of Chinese cheap labor. The burden bearer of China is the porter, the carrier who with cargo on either end of a bamboo pole transports the freight to and from the waterways and over the stretches between the rivers and interior cities. Picture him. With 50 pounds of goods at either end of the pole he balances the pole delicately on his shoulder and patters over a pathway at the rate of 20 to 25 miles a day. His pay equals 50 cents a day in our money. That is half a cent a mile per pound.

On the Norfolk and Western R. R. and the Chesapeake and Ohio and the Virginian we transport coal from the mountains of West Virginia to the seaboard for approximately 4 mills a ton. The machinery of the white man has made it possible to transport freight at one-twenty-fifth of the cost of that of the Chinese carrier.

What of China when such a revolution as that simple illustration of economic difference is translated into an active fact, a reality, and when to it is added the transformation that comes in the needs of man in clothing, in furnishing and in what we term luxuries when he is lifted out of the customs and the habits that are old and comes to require those that are new.

There are two classic stories of America's influence in China. The Standard Oil has come to be known as the Light of Asia. In former days when the Thinking Machine operated at 26 Broadway it was the practice of John D. Rockefeller, H. H. Rogers and the group that made up the leaders of the great oil company to gather at regular intervals and plan for broadening the sphere of oil. No one ever will appreciate to the full what Standard Oil, in its efforts to find new markets for its products, did to open new markets for

all kinds and characters of American products.

One of the fields it sought to open was China. But when it sent agents there to investigate the country they reported the opportunities were narrow, for the Chinese, other than comparatively few among the urban population, went to bed when the sun went down and knew little and cared less for artificial illumination.

The thinkers studied this problem and determined they must enlighten China. They were sanguine that the long nights of winter at least would be made less dreary for the Chinese if they knew the virtues of Standard Oil.

But were they to spread the light? Mr. Rockefeller solved the problem. He had a man design the simplest and cheapest and yet the most practical kerosene lamp ever made. Tens and tens of thousands of these were manufactured and shipped to China. Agents went about the land and gave them away. At night they lighted the lamps and the Chinese marveled. They bought kerosene to use in the lamps.

The Lamps Soon Gave Out

SOON the demand for lamps was so great that the supply was exhausted. Then it was determined to charge only the exact cost of manufacture for them. They were purchased with avidity. Also the Chinese purchased kerosene.

Through that simple lamp Standard Oil developed its immense China trade which is one of the largest it commands outside the United States. It has been said half humorously, half seriously, that the Standard Oil kerosene can has become the standard of measurement in China and that nowhere can you go without seeing an S. O. can or an S. O. lamp.

What is more important is that Standard Oil has added hours to the length of the day in China. Because of this it is called the Light of Asia.

The same Charles Farnham, the engineer who was mentioned in a preceding article, used to tell of a trip he made far into China. He had built a railroad in the southern part of the country, and needing a rest and desirous of being able to say he had gone deeper into China than white man ever had reached before, he engaged a boatman and hired a small boat and traveled for months up one of the rivers. The river was a great one and he determined to go to its headwaters. After he had been journeying two months he was informed by the boatman that white man never had been in that far distant territory before. He had confirmation in the surprise with which natives he saw, when he went ashore occasionally, looked upon him and from the questions they asked his guide. For a month or more he continued. The river narrowed and shallowed until it was apparent he could go little further by boat. He was satisfied.

That evening, round a bend in the stream, he saw a good spot for camping. He ordered his guide to pole to that place. Nearby a flat-bottomed craft was moored. After making fast to a tree Farnham went ashore and later sauntered over to inspect the other craft.

He went aboard and saw a white man stretched out under an awning. The man scrutinized him closely and then said, "Where in the world did you come from?"

Farnham told him, and after expressing his amazement at finding a white man in a part of the world he felt sure white man never had been before, asked him who he was. The stranger told him, and added that he was an agent of the American Tobacco Co.

The scouts of trade, the scouts of American trade, have gone where explorer never ventured and they will keep going. China is going to see more of them in the next five years than the last fifty. The land that has been one of slumber is to be that no longer. The American motor truck now crosses the Gobi desert on regular schedule carrying freight from Tien Tsin to Turkestan and these motor trucks come from the plant of the Wichita Falls, Texas, company. What may you expect when a Texas enterprise conquers a desert that defied Asia for longer than the stretch of written history?

Given transportation, China will be the greatest field for the American engineer, manufacturer, or merchant there is outside of the domestic market. Today in all China there is less railroad trackage than embraced in either the mileage of the Northern Pacific or the Southern Railway. Its waterfalls and its rapids harnessed, China will have hydroelectric power greater than that of two score Niagaras. Given good roads, it will know every kind of car from the Rolls-Royce to the Ford. Given tractors, it will open up lands never touched by the plow.

Only the fringe or the skin of China has felt the effects of latter-day civilization. But in that fringe there has developed much of manufacture, much of commerce. Today China ranks third in cotton production. Today China is coming into the field of cotton manufacturing in a fair way. So, too, in a hundred other lines. Upon Japan and the United States depends much of the immediate development of the commerce and the industry of this most promising field in the world today. The advantage of proximity is with Japan. The advantage of sentiment and enterprise is with America. That Japan does not doubt America is her real rival may be gathered from what the Japanese papers say these days.

A Japanese View

THE Tokio *Aishi*, one of the most influential publications in the chrysanthemum kingdom, expresses in the following what may be accepted as the national view. It says:

"In the big gamble of the world war Americans grabbed an enormous amount of money, and are on the alert to extend their commercial markets in every corner of the world. Now is the best opportunity for pushing American commerce in the Far East, and this fact should not be ignored by all the countries having vital interests in that part of the world.

"Before the war, Great Britain commanded the oriental market, and there is no doubt that when her industries have been restored to normal conditions, she will resume her commercial activities overseas. The Far East will thus see great competition between America and British commerce. The chances are, however, overwhelmingly in America's favor.

"There are two principal reasons for this prediction: the individual superior ability of American business men and a change in America's commercial policy.

"It seems that America has now nearly completed all the necessary preparations for the future commercial war. That before the war America was unable to break the commercial hegemony of Great Britain and Germany was due to lack of independent financial and shipping facilities. Since the war, however, America has become the second largest maritime country of the world and is now organizing efficient financial connections throughout the world."



MAKE way for the royal garbage. Here it is leaving the gate of the emperor's palace upon the familiar wheelbarrow, the wheelbarrow that has not changed its form for three thou-

sand years. It is characteristic of Chinese liberalism that the republic allows the emperor to live quietly and comfortably at his old address. Manchu guards are on duty at the entrance.

The Business of Farming

In the hunt for the ultimate profiteer accusing fingers have been pointed at the farmer. Let's see just how his risks and rewards compare with those of a city industry

By A. M. LOOMIS

Secretary to the Washington Representative of The National Grange

JAMES HAMILTON has a large interest in a department store, one of the big enterprises of the thriving mid-western city, where he is also head of a farm implement manufacturing concern and one of the leading men of affairs. The department store and its problems, with their human relationships, have interested Mr. Hamilton greatly. Lately, however, the business has seemed to be less satisfactory than usual. Mr. Hamilton has given some attention to this, and is sure that the cause is not in the methods or the management. In fact, he is quite sure that this enterprise is doing better than the only large competitor. But he senses a change in conditions, unrest and dissatisfaction among the crowds of shoppers, dissatisfaction in spite of the fact that there is plenty of work for everyone. His own clerks will not stay; the store hours have been shortened. The gist of it all is that profits are declining.

Thinking long and carefully, Mr. Hamilton has decided that down at the bottom of it all are the prices which everyone is compelled to pay for foodstuffs. People, he reasons, are compelled to buy enough to eat, and with present wages they not only satisfy necessity but they gratify appetite also, and this now costs so much that other business is suffering. There never was a time when farmers were getting such high prices. It bids fair to continue. It is time for him to quietly get out of the store business and to buy some good farm property.

The Young Farmer's Viewpoint

COMING to this tentative conclusion, Mr. Hamilton decided to send for his farmer nephew to talk it over. Richard Hamilton, his older brother's son, named after his own father, had been running the old farm for two years and seemed to be doing well. After Mr. Hamilton left the farm a quarter century or more ago, the older brother stayed on and the old father and mother lived there with him, enjoying, until the end, the home their hard work had carved out of the wilderness. But under this brother's management the farm had sufficed only to educate the two children, and now the son, Richard, had the farm, his education—little else—but was succeeding. James Hamilton wanted a first hand "close-up" of actual conditions and has invited Richard to visit him, and the two are just finishing luncheon at the City Club.

"Farming, as I observe it," Uncle James was saying, "is old fashioned. Modern methods of efficiency and the skilled use of labor saving machinery, which have made American factories the wonder of the world, are not in evidence on the farms. Farmers do not seem to have the spirit. We have learned to make four plows with the same labor we needed to make one when I first came to this factory."

"Yes, and in other lines that record is exceeded in many instances," replied Richard. "What you don't understand, and what every farmer does understand, is that these methods don't fit the average farm. Farm machinery,

with a few exceptions, does not reduce the cost of production on the farm. Wheat was harvested for a dollar per acre when it was cradled and bound with straw. Now it costs more than a dollar per acre for just the twine used in the reaper and binder. Other factors, especially the factor of risk, in farming so far outweigh the labor factor that your idea just don't fit farming. You can't cut out the risks by factory methods."

"The average farmer is too—well, we'll be charitable and call it 'slow'—to try it," insisted his uncle.

"He don't need to try it. City men who plunge into farming provide sufficient examples. Common horse sense, his experience, since he started picking up chips when a baby, tells him. I don't know much about your department store, and less about your plow factory, but I do know something about farms, and I think I can tell you some things you may not have thought of."

"Fine," agreed Uncle James, "that is what I want you to tell me about. Wait until tonight after dinner, and then shoot."

After dinner, uncle and nephew drew their chairs up in front of a pleasant fire in the fireplace in Uncle James' big library, and the talk started where it recessed after luncheon.

"You tell me," said Richard, "that the department store has not been showing satisfactory returns. People generally claim that the retailers are the worst profiteers."

"Our profits have been decreasing since 1914," was the reply, "and I know that small stores have been going out of business right and left, not only in this town but almost everywhere. Our clerks won't stay with us in the store, our men won't stay in the factory, and costs keep climbing. I would like to show you some of the store reports. You would get a real idea of some of the risks we encounter."

"Let's check up. You tell me about the

department store, while I tell you about the old farm," replied the nephew.

"I have a pay roll about three times what it was, store hours an hour a day shorter and no Saturday nights," started Uncle James.

"Farm labor cost is about three times what it once was," was the nephew's reply, "but let's start at the starting place. The first factor in your business is capital, which must earn its return, then the cost of store equipment, rent—or interest on the cost of the building, if you own it—heat, light, janitor service. All are fairly definite well-known factors. On my side I start in with the value of the farm, stock, buildings, and equipment."

"You forgot my delivery service, horses, wagons, and automobiles," suggested Uncle James.

"Yes, and I forgot to mention my motor truck, and the team and wagon kept for rainy weather, and I forgot the cost of fencing and fence fixing on my farm. You know what fencing costs," he added as after thought, and Uncle James chuckled. Wire fencing is made in one of his factories.

Now Farming Must Pay

NOW we are ready to do business. Right here I must tell you," said the younger man, "that the whole state of mind in the country has changed in three generations. You knew about the farm conditions when you were on the farm. Your father farmed just for a home. If, at the end of the year, he had money to pay his taxes he was satisfied. Then came the generation of my father. This was the time in our country of land grabbing and land mining. The successful farmers acquired all the land they could get. The less successful ones drained the fertility of their lands for their living and the education of their children. Agricultural college students got the money which paid their college expenses from depleting the fertility of the farms which they are now doing their best to restore. Now we come to the third generation, and farming has become a business conducted for profit. It takes money now to buy for ourselves and our families—out on the farms—the things of life that other people now have—not on the farms. We think these things are good, and we will have them, or else go where they are.

"You still think we are living on the farm of twenty years ago, but you are badly mistaken. We are thinking today in terms of bathtubs, carpet sweepers, talking machines and lavatories in the house. We have come to know what personal comfort means to living.

"We are farming now for profit, just as much as you are running your store for profit. Don't let that fact escape.

"We raise crops to sell and we raise live stock to sell. The very first risk we take is the risk of poor seed. You buy goods to sell. If they are not right, you have recourse. We get seeds which will not germinate, or that are filled with daddie, or quack, or mustard that infest the farm for years to come. You suffer



from unfilled orders and from goods not equal to samples. Which set of risks do you prefer?"

"We buy a lot of things the public will not buy," suggested the uncle.

"I am coming to the risk of the fickle public a little later on. That is a risk, to be sure. I am glad there is no demand for round nose wheat instead of pointed nose. But there is a demand for white eggs in some places and not for brown ones."

"Then," continued Nephew Richard, "I wonder if you ever considered the item of animal sterility and failure of reproduction as a farmer's risk? This year, for example, pig litters are reported to be small. Suppose you order ten bolts of ribbon and but eight are delivered, and you can't get any more, but are compelled to pay the full price for ten. Then the difference between profit and loss in a sheep enterprise lies in how many ewes deliver twin lambs. Again, contagious abortion is an alarmingly prevalent disease which has wrecked many prosperous breeding establishments and is a constant risk in every dairy."

"Our greatest risk," continued Nephew Richard, "almost everyone knows about. It is the weather risk. Still I am not sure anyone not brought up on a farm can clearly evaluate the weather risk. This risk, with that of insect pests, plant and animal diseases, is so nearly a bar to amateur farming as to constitute the obstacle thus far insuperable to any 'back-to-the-land' movements. Hail, wind or flood may, in a few minutes, wipe out a year's work, or more."

At the Mercy of the Weather

DID you know that a day or so of unusual heat just at the critical time for an oat field may reduce the crop 25 per cent, a few hours' rain may half ruin a wheat crop, a few dry days may cut a potato yield a quarter to a half, a cold rain may spoil an apple crop, one hot muggy day may ruin a bean crop or badly damage tomatoes?"

"Then there is another angle; weather limits planting, cultivating, and harvesting seasons to very short periods. Upon this depends the amount of machinery needed to do the work and on this many items of costs, interest, depreciation, etc. Weather limitations vs. machinery available is the limiting factor in acreage. Why farmers do not own machines cooperatively is answered by this. No other business enterprise could support as large an investment in machinery, in proportion to output and use, as does farming, and this must all be paid for."

"Young man," interposed Uncle James, cutting Richard short, "you don't begin to know all that weather risks mean. Consider the effect of those three cold rainy days before Easter, on my millinery department. Consider what any backward spring means to the clothing trade; consider having a cold summer or a warm Christmas, or so much snow on holidays that roads are impassable. I'll match weather risks with you any day."

"Storms sell merchandise as well as stop sales," countered Nephew Richard.

"April showers bring May flowers," quoted his uncle.

"Our risks have only begun," continued the younger man after a laugh, "when we get the crop harvested, or the live stock ready. Then there are market risks. Lack of cars comes first; then selling in the buyer's market. You know the prices sag until we finish selling, then invariably rise."

"I'll sway my uncollectable accounts for yours," interjected Uncle James.

"Then your credit system needs overhauling," answered the nephew. "You sell

face to face; farmers are compelled to sell at a distance, or else deal with buyers who must make large profits to stay in business."

"Our situation has been summed up like this: The farmer stakes his year's work, and that of his wife and little children, the cost of seeds, feeds, fertilizer and farm equipment, against the elements of nature, and the insect enemies and plant and animal diseases, and then, thankful for what crop he harvests, he sells it all to the other fellow, at the other fellow's price, in a market over which he has no control."

"Now, young man," said Uncle James, somewhat nettled, "don't you run away with

Talk About Risks!

IT MAY BE that the odds in the constant gamble with bugs, weather and markets is one of the things that makes farming so fascinating. The general public does not realize that agriculture is just about as certain as speculating in oil stocks. Observe these facts and doubt the statement if you can:

One day of unusual heat at the critical time may reduce the yield of an oat field 25 per cent.

A few hours of rain can half ruin a crop of wheat.

Potato yield may be reduced from 25 to 50 per cent by a short dry spell.

One cold rain can ruin an apple crop.

One hot, muggy day may entirely spoil a crop of beans.

And to these features must be added the fact that after the farmer has brought his crop through all such dangers, he has practically nothing to say about the prices he gets.—THE EDITOR.

the notion that you have said all there is to be said on this subject. There is that little question of changing styles, which keeps most of us in the merchant business lying awake nights. Milk from a red cow is no different to the buyer from milk from a black and white cow, but with cloth it is different again."

Nephew Richard grinned. There was a little more to this milk story than Uncle James knew about, but it might be just as well not to enlighten him.

The Pursuit of Public Whims

AND you don't need to worry about whether the transportation company will change their routes so no buyers can get to your farm. I had that happen just last year. The street car company rerouted its cars so that thousands of people who formerly stopped right in front of my store were moved over to another street three blocks away. Then there is the problem of shifting populations, business sections moving, of styles changing, all impossible to forecast, and without rhyme, reason or apparent cause.

"What do you know about competition?" continued Uncle James. "It drives wedges into every line of business, manufacturing, wholesaling or retailing. No telling when a syndicate store may rent a place under your

nose and start in to ruin your trade and put you out of business."

"I could get along with competition, I think," responded Richard, "if I could meet my competitors face to face, and talk things over with them. I notice that when I buy milk pails they cost the same in all the stores. But what can I do with 25,000,000 competitors and living from a mile to 3,000 miles away, who sell the very same things I sell?"

"Now that I have the floor again, I want to tell you about credits. I know this isn't a risk, but it is a handicap you don't have. I'm told that retail business is frequently carried on with more than 80 per cent bank or manufacturers' credits, less than 20 per cent invested money. A system of credits developed through centuries has been devised for this purpose. It is based on a three-months turnover; that is your season. One renewal covers every ordinary merchandising transaction. Farmers just literally don't get any credits. Our assets are not liquid. Some of us can borrow money, but usually only when we get security outside of our business."

"Farming operations—not counting land mortgages—are handled with less than 20 per cent credits, the exact reverse of merchandising. This is a tremendous handicap. A three-months credit term applied to farming is practically useless."

The Vital Item of Credits

I WISH I could do business without borrowing money," sighed the older man as his mind went back to the session he had the day before to get \$50,000 necessary to tide over in the factory until goods began to move.

"You will have to admit, Uncle," said Richard after some minutes' pause, "that I have made a pretty fair case of the risks we are entitled to provide against when we do get a crop. Reports today show the present condition of winter wheat in the United States was 30 per cent below normal, but we had to sell at fixed prices last year. What show has the farmer in such a game?"

Then you don't think the country is prosperous, and that prices of farm products are higher than they should be," queried Uncle James.

"I don't know whether you think a farmer thinks and figures the same way you do or not, Uncle, but I am telling you that the census figures, which show city populations are increasing, some 50 per cent, and farm populations actually decreasing, make me pretty certain that they do figure just the same as other people, that they know they are not getting the returns on the farms that other industries have been paying, and that they have been, and still are, going 'where the getting is good.'"

"I have a job for you at \$3,000 a year down in my factory, as assistant to the chief of the research department, salary to start tomorrow," was Uncle James only and unexpected reply. "The job is vacant now. You get some one on your farm and report as soon as you can."

"No, thank you sincerely," said Nephew James, thoughtfully. "I choose farming deliberately, risks and all. I prefer to take my risks with providence rather than with people. I'll stay on the farm, and I want you and Aunt Clemma to spend a week with me when berries and cherries are ripe. Ask Professor Howard, over at the college, to send you a young man from Farm Engineering for your research work. He won't want so much money. I studied farm crops and animal husbandry."

"Sorry—Line to China's Busy"

The increase in messages has been so great that it has brought about a crisis in the war-weary cable system; wireless helped some and there is now further hope for improvement

By F. R. ELDRIDGE, JR.

Chief, Far Eastern Division, Bureau of Foreign and Domestic Commerce

WHEN the American exporter wants to take advantage of a temporary flurry in silver and cables his Shanghai branch to dispose immediately of steel bars in his Chinese warehouse, he is somewhat perturbed, to say the least, after waiting two weeks for a reply, to be told that his cable has just been delivered at Shanghai the day before. In the meantime he has visions of silver slipping and sliding back, back, and his orders being punctiliously carried out thirteen days after they were sent and nothing for him to do but figure up his loss.

Is there any wonder he gets his Congressman on long distance, telegraphs the Bureau of Foreign and Domestic Commerce, calls up his local Chamber of Commerce and tells the Secretary to move heaven and earth, do something, do anything, to relieve the Pacific cable situation.

Same Old Scapegoat

BUT, like most "situations," the conditions which, until recently, obtained in the matter of communicating across the Pacific, are the culmination of a series of unrelated circumstances for which no one is particularly to blame. Of course, it is all due to the war.

If the war had not put out of commission the facilities of the Great Northern Company of Copenhagen, consisting of cables and land lines between Europe and China, and Japan by way of Russia and Siberia; if the greatest conflagration in history had not paralyzed the cables and land wires operated by the Indo-European Telegraph Company of London, between Europe and the Far East, by way of Germany, Russia, Persia, and India; if the submarines in the Mediterranean had not interfered seriously with cable repair work, and, consequently, greatly reduced the efficiency of the Eastern Telegraph Company's cables from England through the Mediterranean to India and the Orient; had not the war played havoc in this manner with three of the five systems of communication between Europe and the Far East, there would never have been the great rush of European traffic to the only two remaining cables to the East, the one operated by the British Imperial Government from Vancouver to Fanning, Fuji and Norfolk Island, New Zealand, Australia, thence to the Far East, and the cable of the Commercial Pacific Cable Company, running on the floor of the sea from San Francisco, Honolulu, Midway, Guam, Manila and Shanghai, with a spur from Guam to Japan.

As if to make matters worse, the same world conflict which turned all this cable traffic over these two strands of copper automatically increased the desire of people to talk across the Pacific. As the war went on this need of communication seemed emphasized.

How great this increase was may be judged from the official records, which show that, whereas only 580,000 words were sent by cable from the United States to Japan in 1913, in 1918 no less than 4,290,000 words, or

seven and one-half times as many as five years before, were sent between the two countries, and, in 1919, 5,500,000 words had been flashed over the same wires.

About half of these messages were government messages, dealing with the transport of troops to Siberia, of the building of ships in Japan and China, and the thousand and one details which must be attended to quickly in time of national danger. But even aside from government war business, and despite many handicaps in shipping, and unstable markets, the Orient's purchases from America increased from \$183,000,000 in 1913 to \$399,000,000 in 1917, and her sales to America increased from \$306,000,000 in 1913 to \$625,000,000 in 1917. This increase in business was due primarily to the cutting off of European markets from participation in Far Eastern trade, and, secondly, to the great demand for American products through Japan for Siberia.

These two Pacific cables were, therefore, kept busy top speed for several years before the end of the war, and even the Commercial Pacific Cable, which has shorter spans and is consequently the faster of the two in transmission, was not able to handle much more than 50,000 words a day. And then, with eight breaks a year, as happened in 1918, each meaning an average interruption of ten days, there remained only two hundred and eighty-five days in the year on which messages could be sent, and this meant a total capacity of about 14,250,000 words annually on this cable, and, perhaps, only 12,000,000 words annually on the slower Vancouver cable.

In order to afford some relief commercial messages were accepted at the two wireless stations which the Navy had taken over at the beginning of the war, but as the full capacity of these two radios was but 15,000

words per day, and only about half the time could be allotted to commercial messages; this meant only an additional 2,500,000 words a year transmitted. Therefore, the approximate word capacity of all means of Pacific communication was 28,750,000 words per year.

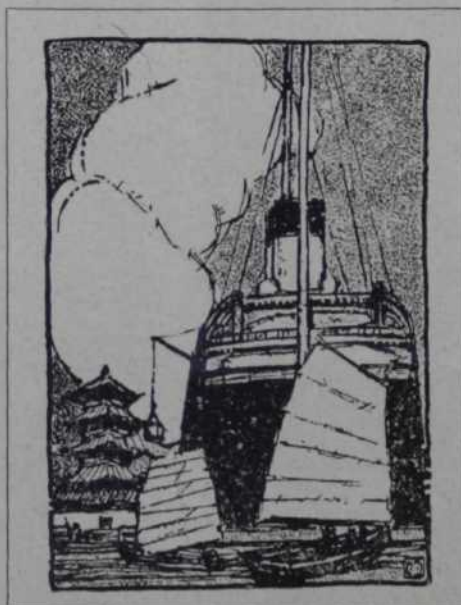
It was not unnatural, therefore, that another Pacific cable should be thought necessary, and a bill was introduced into Congress appropriating \$8,000,000 for its construction by a proposed Pacific Cable Commission. But in order to construct such a cable a large amount of gutta percha would have been required, and with the world's gutta percha market at Singapore handling practically the world's supply of 5,000 tons, preference was naturally given to British cable constructors, and there was no sufficient supply in sight for an American cable. Moreover, as the natives in the Dutch East Indies were cutting down, rather than tapping, the gutta percha trees in order to get the latex, the supply was rapidly nearing exhaustion and required greater and greater penetration into the jungles in order to bring out the valuable product, and this gutta percha was absolutely necessary for cable construction, as no other known substances can withstand the action of salt water, heat and cold, and the great pressure on the bed of the ocean.

The Limitations of Radio

UNDER these circumstances there was only one alternative, and that was the radio. Radio communication was not as desirable as cable communication, first of all, because of its lack of secrecy. Commercial codes are generally not secret codes, and it is not always desirable to have our competitors in Japan know what we are quoting our customers in China. Then it was impossible to check errors in transmission by radio caused by atmospheric conditions, because the same conditions continued to prevail when the second message was sent. But the greatest and most practical handicap was the difficulty in acquiring the right to erect radio towers in foreign countries and equip them with competent foreign personnel.

Great Britain had already negotiated an agreement with China, whereby a monopoly of wireless communication was granted her, and it was impossible to gain China's permission to erect the necessary equipment. Moreover, no matter how many and how well equipped the stations in the United States, Hawaii, and even the Philippines should be, unless there were stations just as well equipped and just as numerous in China and Japan, the net result would be a chain no stronger than its weakest link.

At the present moment there are only seven wireless stations in the whole of China, with normal range of 650 miles (day) to 1,300 miles (night) each. There are sixteen stations in Japan, ranging from 200 to 450 miles (day), and from 300 to 1,500 miles (night), and one station at Funabashi, with



a range of 3,000 miles (day) and 5,000 miles (night). In addition to these there are three Japanese stations in Chinese territory, five stations in Siberia, six stations in French Indo-China, two stations at Hongkong, two in Siam, five in the Dutch East Indies, four in British North Borneo, and two in Straits Settlements, two in the Caroline Islands, and one in the Marshall Islands. All of these stations range from 200 to 400 miles (day), and 500 to 1,000 miles (night), except the one at Sabang, Java, with a range of 2,000 miles (day) to 6,000 miles (night), the one at Hongkong, with a range of 1,000 miles (day) to 2,500 miles (night), two in Siberia with a range of 2,000 miles each, and one in the Marshall Islands, with a day range of the same distance.

It will be seen that considerable improvement must be made in the equipment of existing stations in the Far East before many of them can communicate with even the high-powered stations at Cavite, Philip-

pine Islands, which is in the center of a 1,700-mile circle touching every important point in the Orient. In many Oriental stations the receiving apparatus is too antiquated to receive from fast-sending stations.

Early in 1920 the Radio Corporation of America purchased from the American Marconi Company its stations, patents, and other assets. The charter and by-laws provide that 18 per cent of the stock may be owned by aliens, but no stock in addition to this 18 per cent foreign owned can be voted, even though held by an American corporation dominated by foreign capital. The Radio Corporation has a manufacturing agreement with the General Electric Company, giving the Radio Corporation full use of this company's facilities for development, research and manufacture, over a long period of years, and also the benefit of being associated with the General Electric Company's foreign companies. The patents held by the General Electric Company will go to the Radio Cor-

poration or America to be used for radio purposes.

This is a strong combination in the right direction, namely, that of placing the United States in its proper position in the wireless communication of the world. The Radio Corporation is already branching out and seeking foreign sites for radio stations, and a real development looking toward adequate communication, especially with the Orient, is to be hoped for in the future.

Meanwhile a gradual improvement in the cable situation in the Pacific is apparent. The Eastern Extension's lines are being repaired and something like normal traffic is being handled, and before long the land lines via Persia and India may be in operation. Moreover, the Commercial Pacific Cable Company is contemplating the laying of another cable across the Pacific, as the permanent business between America and the Orient seems to assure a profitable future for such an undertaking.

The Quidnuncs' Morning After

When the Supreme Court announced its decision on stock dividends, a wild spree in statistics immediately followed—but it developed later that several important points had been overlooked by those who knew it all

THE QUIDNUNCS had the time of their lives in the days following March 8, 1920. They have probably marked that date in bright red on their calendars, for it marked a grand statistical orgy about stock dividends, and since the passing of the drink that cheers, statistics hold front rank as our national intoxicant.

The Federal Government could not tax stock dividends as part of a man's income, the Supreme Court said. Forthwith the quidnuncs went in for a statistical spree. Without stopping to estimate the possible aggregate of all stock dividends that might be declared by the entire 250,000 corporations in the country that can show a profit, they declared in their haste and enthusiasm that the Government's part in taxes would have been one hundred million, five hundred million, and even a billion dollars!

After the jamboree in dollar signs had been in progress for eight days, the Secretary of the Treasury told the Committee on Ways and Means that most of his experts thought the figure was less than \$25,000,000.

Even after the decision which the Supreme Court rendered on March 8, stock dividends will remain of several different sorts, and according to their exact kind will be taxable or non-taxable to recipients as income under the federal law. Besides, the decision of March 8 may not prevent stock dividends, which are not taxable under the federal law, from being taxed under the income tax laws of some of the states. At the same time, the federal decision may have a bearing upon administration of state laws. For example, it has already been held by some state officials that, as the Supreme Court says, stock dividends are not "income." A state law taxing income does not permit collection of tax on stock dividends.

It is a dividend paid by a corporation in its own stock that, according to the court, is not subject to the federal income tax. If the company pays a dividend in the stock of another corporation, this dividend is taxable to the recipient. If a corporation pays dividend, not in its own stock, but in its bonds or notes, the dividend is taxable to the stockholders.

If dividends are paid in cash, even out of earnings made by the corporation before the income-tax amendment to the Constitution was adopted, Congress has power to levy an income tax on them, although Congress does not, in the existing law, see fit to impose such a tax as to earnings made before 1913. Sometimes a corporation offers new stock to its shareholders and at the same time declares a cash dividend in amount equal to the par value of each shareholder's proportion of the new stock, and thus affords each shareholder an option, either to use the money to buy his part of the stock or to spend in other ways, with loss of the chance to buy the stock, such dividends will be taxable.

In reaching the decision of March 8, six justices of the Supreme Court said that they had first to distinguish between what is and what is not "income," as the word is used in the amendment to the Constitution. It was used there, they said, in the light of the earlier decisions holding that the Federal Government could not levy income taxes and consequently was to be understood in the sense necessary to reverse this earlier situation. Income, they accordingly said, is gain derived from capital, labor, or from both combined, and includes profits obtained through sale or conversion of capital assets. It is not a gain accruing to capital, or a growth or increment in the value of the investment, but is a thing of exchangeable value proceeding from the property and severed from it; i. e., received or drawn by the owner for his separate use.

When a Stock Dividend Isn't

APPLYING this conclusion to the situation of a stockholder in a corporation, the court said he had a capital interest evidenced by his stock certificate. Of a year's profits a growing corporation may have only a small part in a form that can be used for cash dividends, the remainder being absorbed in increased plant and equipment, stock in trade, and the like, and being credited to undivided profits or surplus. Eventually, there may be a book adjustment of such a surplus through a "stock

dividend." In essence this is not a dividend, but the opposite. No part of the assets of the company has been separated, and nothing is distributed but paper certificates which evidence an antecedent increase in the stockholder's capital interest. The stockholder has received nothing for his separate use out of the corporation's assets, all of which remain with the company. Accordingly, in the case of a bona-fide stock dividend, the only kind the court considered, the stockholder has not received any income.

Of course, if a stockholder sells his stock, either original or received, in this manner, and realizes a profit, he pays federal income tax on this profit.

Three judges dissented. They expressed an opinion that a stock dividend is income, and two of them based their opinion upon their conception of the popular understanding of the meaning of income at the time the Constitution was amended. The third judge considered that a stock dividend is a method of distributing corporation profits, and in any event thought that the lack of power in Congress to tax such a dividend, under the Constitutional amendment, was not so clear that the court could properly exercise its high prerogative of declaring congressional action invalid. No doubt about the matter was admitted by the majority of the court, which said that constitutional limitations are not to be overridden by either Congress or the courts.

The Treasury Department has expressed concern about the results of the case in a situation to which the court did not refer. This is in connection with "personal service corporations," i. e., companies which derive their earnings chiefly from the personal efforts of stockholders devoting their time to the business. The law says that such stockholders are to pay tax like members in a partnership, including tax on their shares of undistributed earnings. The department apparently thinks that the decision respecting stock dividends will prevent such a tax. The court, however, seemed to endeavor to make it clear that its decision was limited to the exact sort of case that was before it.

Campaigning with Card-Indexes

Gone are the days when the candidate buttonholed his victim and handed him a rank cigar—the new plan is to go after a mobile minority with files and form letters

By PYM

IT'S AS simple as changing a dime into a nickel and five pennies. Here is the way it works:

Put down the voting unit as.....	100
Give <i>G</i> (a party or a candidate) the unswerving allegiance of.....	48
Give <i>H</i> (ditto).....	47
Total unswerving.....	95
Balance of power.....	5

The swervable five, added to *G*'s forty-eight, would run up that total to fifty-three, or, added to *H*'s forty-seven, the latter totals to fifty-two—in either case an absolute majority.

Hence the group of five can concern both *G* and *H* more than all else having to do with the situation political. Each, wanting to win, will go pretty far, albeit to the limit, in bidding for the group's support.

Therein lies the secret of the most pronounced political maneuverings, with relation to this year's national campaign, yet in evidence.

The symbol of the tendency is the card-index buttressed by scrap-books.

The strategy helped the Anti-Saloon League in bringing about national prohibition.

In each community there was a mobile minority that was for prohibition before it was for anything else or any individual. The strategy was to resolve those minorities into what the English call "plumpers" and the French call "blocs," and use them as solid phalanxes against this candidate or for that candidate. The time came when, in most congressional districts, those mobile groups of for-prohibition-before-anything-else-

voters constituted invincible balances of power.

Result: The Eighteenth Amendment.

Until the anti-saloonists demonstrated that it could be done, few people thought that kind of political strategy could be successful in this majority-worshipping country.

Now the reverse is the case. Everybody virtually seems inclined to think that it is the only political strategy that is worth while.

The result is that Washington distributors of index-cards, scrap-books and filing-cases are enjoying phenomenal prosperity. They can't supply enough of them. When some war-originated bureau of the Government suspends, the typists released from jobs can almost invariably find lodgment in the scores of semi-political establishments lately set up in the national capital for the purpose of influencing politics on behalf of some group, some interest or some idea, or group of ideas.

Even the ridiculed *Congressional Record* has been found to be a thing of exceeding value. Hundreds of its daily issues are scissored with the care of historians cataloging history. Whole floors of office buildings rattle with the tat-tat-tat of typists transcribing names and general information on cards which, skilfully systematized, are to the new political strategy what maps were to the strategists in the war.

How did Senator Hayseed vote



Men will line up all the red-haired men of the country. In any congressional district they will aggregate, say, 5,000 voters. Now it is expected that the other

back in 1904 on a resolution expressing sympathy for the orphans of Lithuania? Out comes a drawer of cards, and here is the answer, just as

recorded in the *Congressional Record*, or, mayhap, the journal of the state legislature in which the present Senator was then serving.

Did Congressman Longcoat ever intimate an opinion on the Irish question? Yes, and here it is, his exact words as supposedly embalmed in the *Congressional Record* or dug from an obscure page in a many-years-old file of the *New York Times*.

But cataloging the histories of men in public life is only an item in card-index strategy. The big work consists of getting the names and addresses of voters who will

back up the enterprise the establishment seeks to promote. They get more than mere names and addresses of voters, but all procurable information regarding each voter—his race, age, financial condition, even religious affiliation and general standing as a citizen.

Letters seeking pledge of his support, unless that support for reasons known is to be counted on, go forward to him, and after his pledge is procured he is asked to send the names of other voters of like persuasion, and on *ad infinitum*.

Thus the names of thousands of voters that they think can be depended on to vote with a single, or a grouping of ideas-in-mind are made into great mailing lists that are constantly enlarged by the endless-chain process.

"Stand together and they'll have to give us what we want," is the motif underlying inspirational literature sent to them.

Do any of the establishments thus expect to line up a majority of all the voters? No; it can't be done. All they look for are mobile minorities that will vote solidly as per prior agreement or arrangement.

Here is how they propose to put it over: The Association for the Advancement of Red-haired

175,000 or more voters in the district will divide more or less evenly in parties or factions, or over a series of national questions. For numerous reasons each side will want to win, but neither has an assured lead of 5,000 votes over the other side. Now comes your phalanx of red-haired men.

"If you will agree to do this one, or these few things, in which we are solely interested, you may have our support," say their leaders, with the implication that they care not what is done with reference to all other questions.

Each side in the big division believes that the interests of the country demand that its general program prevail; believes it so strongly, perhaps, that it counts capitulation to 5,000 red-haired men on one or two matters as insignificant in comparison with the success or failure of the big program.

As I hope to show, it is not so simple as it appears. It looks so easy, however, that a score or more establishments located in Washington are endeavoring to make use of the strategy. Therein lies one of the obstacles—too many are trying to play the same game.

There are a half dozen farming groups looking to it more or less for the sustention of special programs. They join in maintaining a clearing house through which they work together on general matters affecting farmers. And when they work together they nearly always get what they want, and, furthermore, are nearly always right. For the farmers, as a whole, can dominate the politics of the country, and when anything is of benefit to the farmers as a whole it is likely to be of benefit to all the country.

But when it comes to internal economy, as

would be hopelessly neutralized. It is frequently suggested that organized labor and the farmers get together and thus bring about what theoretically could be a genuine majority party. But what similarity is there between the interests of the farmers and organized labor except in so far as their interests are common to all the country? That's why the labor groups and the farm groups can't pool resources and run the country to suit themselves.

Even organized labor itself, barring local instances, has never been able to func-

Senator in one day received more than 500 telegrams from constituents, who urged a certain change in the proposed legislation. They were from all sorts of voters, few of whom had any direct interest in meat packing, for they live in a southern state. On the same



tion politically *en bloc*. The reason is that, barring such questions as the closed shop, collective bargaining and perhaps the length of the working day, different labor groups haven't many interests that are identical. The Big Four railroad brotherhoods, realizing, if not admitting that fact, have been chary about even nomi-

nally affiliating with other groups of organized labor.

Perhaps the most ambitious group move with a labor setting is represented by the Plumb Plan League, which is backed by the Big Four brotherhoods. Its promoters have built up a remarkable indexing and cataloging system, claiming already to have procured pledges of support from more than 2,000,000 voters.

But neither organized farmers nor organized workmen are the only elements political that are looking to group strategy for success in putting over their demands. There are several with so-called moral objects in view, like the establishments set up out of interest in some European racial question. You'll find one in nearly every Washington office building.

Steps have been taken to counter the Anti-Saloon League with its own strategy. There is, at least, one light wines and beer organization that claims already to have procured from about 50,000 voters unreserved pledges to support no candidate that doesn't agree to favor liberal interpretation of the Eighteenth Amendment.

Then there are the ex-soldier groups, which, to the politician, are the most perplexing of all. They are not using the card-index method to a great extent, for they don't consider it necessary.

Card-index strategy is not only being planned for use in the coming campaign; it is already supplanting the old-fashioned button-holding type of lobbying.

When the packer bill was before Congress, a

day the office of a mid-western Senator was similarly deluged with like messages. Some of those received by both Senators were compared, and many were of identical wording.

A card-index file maneuvered in Washington accounted for both onrushes of telegraphic appeals.

Like things happened when the railroad bill was up. What even close affiliation can be made to yield when handled in the card-index way was shown by what happened when it was found that the House bill contained a provision prohibiting free passes for railroad attorneys and surgeons. Within forty-eight hours Senators were overwhelmed with messages from lawyer and doctor constituents. The provision was stricken from the bill.

When a group or interest now wants to bring "pressure" to bear on a member of Congress its representatives get busy with the card-index. Constituents are prompted to write and wire, and to get others to do likewise.

That form of lobbying largely defeats itself by the liberality of its use.

The Senator Rarely Sees 'Em

I CAN tell, after the first one or two letters or telegrams, that a manufactured campaign of "pressure" from back home is on," said a Senator's secretary to the writer. "When I see one coming I fix up a form acknowledgment, then toss all messages to a typist, who answers and files them away. The Senator rarely sees them."

The development of group or *bloc* politics is giving candidates and party managers much concern. They still think and plan in terms of national opinion, but they are inclined to maneuver in terms of group opinion or group reaction. It isn't what a majority of all the voters may think about a question that concerns them so much; it is the probable reactions and counteractions that may be expected from groups that give them worry.

The growing multiplicity of groups is putting the politicians in a position whereby they can play one group against the other. For the full success of group political strategy consists, not of bringing one of the two contending sides to the adoption of its views, but of playing "both ends against the middle."

nfluenced by national laws, different farming groups have more or less conflicting interests. The wheat farmers of the west are constantly complaining on the score of preferential treatment accorded the cotton farmers of the south, and vice versa. For what one produces the other buys.

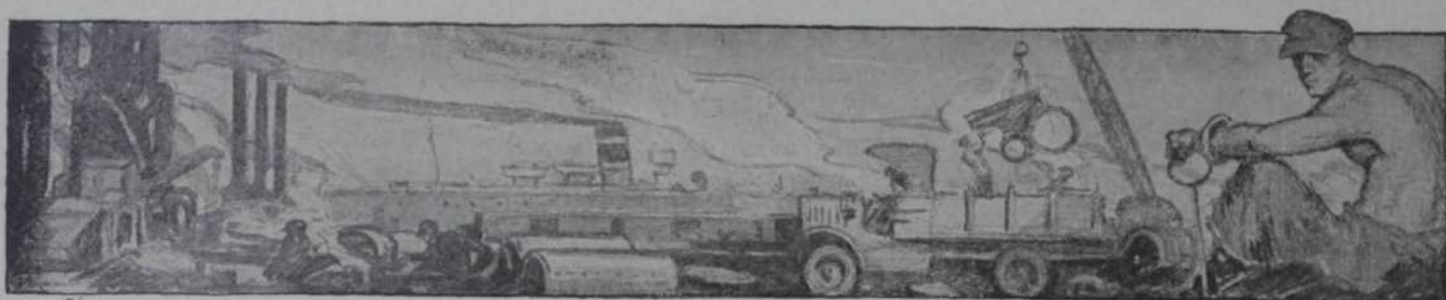
Several years ago, when the Canadian reciprocity agreements were under consideration, the head of a national organization of farmers had to hide out until the question was settled. Members of his organization in some sections wanted reciprocity; those in other sections didn't want it. Each sub-group expected him to espouse its views. He saved his leadership by dodging.

About the same time a mid-western Congressman queried every voter in his agricultural district on the tariff question. Almost without exception they wanted protection for what they produced and free trade for what they consumed and didn't produce.

Now there are several farming groups, developed in the main around certain products like wheat and cotton, that aim at flinging mobile minorities at the heads of national politicians.

Likewise there are several different labor groups that are cozening the same idea. Through the National Federation of Labor the unionists work together more than do the farmers through their rather loosely formed federation.

Mr. Gompers won't tolerate the suggestion of forming a labor party, for, he confesses, it would be in a hopeless minority and, isolated,



On Making Brick Without Straw

HUMAN NATURE, guiding and dominating man's relation to man since the Beginning of Things, is still with us. It is so much a part of us that when man starts out to rearrange details of the universe he is apt to leave it out of his reckoning. Many a fine recipe, carefully followed, fails, because old human nature has been omitted.

Certain gentlemen in Russia evolved a millennium. Despotism was to go; no managers; no capitalists; no private ownership of land. Men were to be truly free and equal. It was all worked out carefully in black and white.

But something was overlooked. In the process of abolishing despotism, a more terrible despotism was set up. More soldiers, more police, no life safe, scaffolds in the streets.

In abolishing managers, industry stagnated, died, and today Lenine is bringing managers and engineers into Russia at fabulous salaries.

In abolishing capital, the economic structure collapsed, and today the Prime Minister is coaxing foreign capital into his stricken country by concessions that no czar in his palmiest days ever dreamed of making.

In abolishing private ownership of land, for some strange reason incentive atrophied. "We cannot maintain nationalization of land," says Lenine today; "the peasant wants his own acre of ground."

The "something" not taken into account was that ever-present, all-powerful, human nature.

Brewers of social panaceas are busy today in a thousand fields of endeavor. They will do well to include this ingredient of human nature else they may concoct an unpalatable mess.

A Discount on Dislike

THE GERMAN LANGUAGE is not yet at par in France. A German-made thermometer bearing an inscription in French sells at 35 cents, while the same article, with the inscription in German, goes for 30 cents.

Lunches as Interstate Commerce

THE PUBLIC INTEREST is a question upon which the Federal Trade Commission and the federal court of appeals for the second circuit disagree for a second time. This court earlier held that there was not in an individual transaction sufficient public interest to warrant the commission exercising its special jurisdiction, and in March it took the point of view that if a manufacturer gave cigars, dinners, and theater tickets to customers and their employes the public interest was not involved. At most, the court thought, there was a question between individuals and the entertainment in question was not sufficient to constitute the sort of fraud which would justify the buyer in discharging the employe who accepted the entertainment and bringing suit against the seller for the value of the entertainment on the theory it had been included in the price.

The position of the court was that all persons are aware that entertainment has been an incident of business from time immemorial, and it found in the income-tax regulations a provision allowing deduction of "spending or treating money" as an expense of doing business when it was an ordinary and usual incident.

Considering entertainment as a form of commercial bribery, and holding all forms of commercial bribery are unfair methods in competition, the commission has responded to the court's

decision by again asking Congress to enact legislation which would assess penalties of fine and imprisonment upon any person who gives or accepts anything of value and intended to influence the action of the recipient in relation to the business of his employer. Such a law would be enforced by the Department of Justice and not by the commission, although the commission might call to the department's attention such violations as it discovered in the course of its activities.

Whether or not Congress has power to deal with the question of who pays the check when a manufacturer's salesman takes out to luncheon a possible customer's buyer, who has come to town to look over the market, would seem to turn upon the relation of the luncheon to interstate commerce. That Congress and the commission cannot go too far afield among matters that may have some reference to interstate transactions the same court of appeals pointed out in a second case it decided in March against the commission. A baking company sent wagonloads of its bread into another state where the drivers made sales to storekeepers, making a gift of a loaf with every loaf that they sold. The commission declared against distribution of "free bread," as an unfair method of competition in interstate commerce. The court held that the sales and gifts were only local, were accordingly not interstate commerce, and were beyond the reach of the commission.

Conceivably, in law as well as in fact, a salesman's indiscretion in forcing a bad cigar upon a person who subsequently may enter an order for lumber, bath tubs, or satin ribbons to be shipped to another state might be a matter for the local police and the state courts, rather than for Congress.

A Hard Market for Soft Wheat

CONTRARIINESS is the prevailing craze, if we believe what is told to us. Our housekeepers will not buy flour, even with concessions in price, unless it is made from hard wheat. Every mother's son and daughter in the land is eating tenderloin steak, according to another story that is well vouched for. And our population is so loyal to tradition and cotton that it pays more for a piece of cotton goods than the price for silk.

Perhaps even contrariiness is a manifestation of economic necessity. At any rate, the Poles and the Austrians and a lot of other folks will be mighty happy over those 5,000,000 barrels of soft-wheat flour we don't like.

Milk Ho!

OVER seventy-two million dollars' worth of milk shipped out of the United States is a rather surprising item. But that's about the 1918 figure, over 551,000,000 pounds. No, it didn't curdle. It was shipped dry. The export of our condensaries is not given much publicity, but it comes to a pretty fat figure. Foreign nations rubbing their eyes of a morning can, figuratively speaking, hear the rattling of cans as Uncle Sam leaves the matutinal bottles on their doorsteps.

National Boots for Britons

STANDARD BOOTS are England's latest item in its program for dealing with the cost of living. They are to be "good, reliable, tough-wearing" shoes, of the "bread-and-cheese" variety, and do not include fancy sorts.

The scheme has been worked out with the manufacturers, who are to get a net profit of 5 per cent. The manufacturing cost is put at \$7, percentages are added for selling costs and the profit, and the price to the wholesaler is around \$8.50. The wholesaler and the retailer get their expenses out of an allowance of \$2.50,



and the retail price of \$11 is stamped on the sole when the shoes are made.

The First 100 Miles Are the Hardest

A DISPATCH to the *New York Sun* says:

"Chestertown, Md., March 18.—Willard Dobson, Jr., has just received a letter from Philadelphia which had been nearly three years in reaching its destination. The letter bore the postmark of July 6, 1917, and contained a money order which was drawn by the Philadelphia post office on the same date.

This evidence of fidelity to purpose and deep sense of contractual obligation will effectually silence those critics who rail at the inefficiency of our Post Office Department.

Reducing the Doll Immigration

BISQUE DOLLS are one of our recent industrial achievements. According to those who know the American manufacture of the bisque heads for which we used to look altogether to Germany was something of a feat. It seems that the chemist who mixes the clays for the bisque must have much of the inspiration of a French chef of the first rank. The combination of clays once achieved makes exactions; it will not perform in the natural way of bisque unless it has a kiln wholly to itself and never defiled through occupancy by clay for any other ware. Besides, there is the ticklish business of coloring, and the blush in the cheek of a bisque doll's head is no easy thing to bring out. In the end, however, the trouble, patience, and skill are well expended, for the bisque head results in the making of an "all-American" doll.

A 23,900 Per Cent Profit

PROFITEERING IN ENGLAND is a theme with a multitude of variations. Now that the government has set up its machinery to catch the profiteers, an Oxford professor of economics, who does not like the fiscal policy, has solemnly filed charges with the local profiteering committee against the Chancellor of the Exchequer, alleging that this high official is making profits of 23,900 per cent by manufacturing paper money at a cost of two cents and putting it into circulation at \$4.86!

Statistics That Lead to Jail

STATISTICAL INFORMATION may contravene the Sherman law. That is the decision of a federal district court about the open-competition plan against which the Department of Justice began proceedings, as described in THE NATION'S BUSINESS for April.

All plans for statistical information, however, are not necessarily illegal, according to the court. Each plan will have to be tested by its own facts. When the facts disclose an intention to cause an unreasonable restraint of trade in interstate commerce, by suppressing competition in prices, there is illegality. In the particular case the court concluded there was illegality of this sort, saying the purpose was to influence production to the end that prices might be maintained on an ascending scale without going so high as to induce consumers to turn to substitutes.

To a degree of cooperation the court was not apparently hostile. It said: "Competition and cooperation by and with those engaged in the same business is not necessarily inconsistent. Successful business will likely result from a proper balance of the two, but too much of either may lead to disaster. Competition without cooperation means destructive competition. Cooperation without competition means the destruction

of competition—price fixing. The latter is the state disclosed in this case."

An appeal will undoubtedly be taken, and ultimately the Supreme Court may lay down a new distinction for us between law-abiding statistics and those that point the way to jail. There is one thing sure, that the world will be in a bad way if, in this day of propaganda, accurate knowledge acquired and issued for legitimate purposes should be the only variety placed under proscription.

When Cargo Sails Itself

ORDINARY ships carry cargo. But here's a case where the ship itself is its own cargo. A simple and ingenious way of transporting timber across the ocean has been revived by a Vancouver lumber man who is building a solid ship of timber as it comes from the forest. This ship is to voyage to England, there to be broken up and sold. This feat reminds one of the fact that as early as 1770 "a raft of timber in the form of a ship" was sailed from Massachusetts across the Atlantic in twenty-six days. This venture was followed by several others, and timber was taken in this manner to the West Indies for many years.

The Cotton Kings of Egypt

THE days of Pharaoh the taskmaster have certainly disappeared. In contrast to the toilers of the Pyramids who sweated under the overseer's bloody lash we have the spectacle today of illiterate natives of Egypt, who still indeed live in mud huts, capitalists to the extent of £20,000 sterling (nominally \$100,000). This they have made out of cotton deals, for Egypt's present wealth in cotton is reported as colossal. Some natives are buying land, too, even at inflated prices, paying off mortgages formerly regarded as family heirlooms. The country is reported to have made at least half a billion dollars. New millionaires are seen at Shepheard's and in the streets of Cairo, spending lavishly for automobiles, jewelry, new houses and every luxury. In the provinces many of the newly rich still live as before, but the old sock up the chimney—or its parallel in native Egyptian economy—is stuffed full to bursting. Browning's famous line might well be changed to "Oh to be in Egypt now that April's here!"

A Contribution to the Anthology of Social Unrest

FRED C. KELLY, the well-known wit and magazine writer, was sitting in his car in front of the New Willard Hotel, with his golf cap pulled down over his eyes, waiting for a friend.

A traveling man rushed out, dumped in his bag, and said to the amused Mr. Kelly, "Union station."

Kelly started up and drove the man carefully and quickly to the station. The passenger, alighting, asked, "How much?"

"Ten cents," replied Kelly.

"How much did you say?" again asked the traveling man.

"Ten cents," again replied Kelly.

"Ten cents!" exclaimed the astonished traveler. "I don't get you. I've always paid a dollar for this trip."

"Sorry, sir, but the law won't let me charge you any more."

"You mean there are regulations?"

"Yes," replied Kelly, enjoying the situation hugely by this time. "They'd put me in jail if I charged you any more."

The passenger exploded. "The next time a taxi driver tries to overcharge me I'll beat his block off."

*The Business Man's America No. 2***KANSAS**

Who would have thought twenty-five years ago that this state, withered by blazing suns and hot winds, would gain the front rank of wealth and progress? It is a triumph of courage and education over the elements

By ARCHER WALL DOUGLAS

IF I ONLY had a good prophet on the staff," sighed the president of the manufacturing company, as he gazed from his costs sheets to his sales charts and thought of the perils of "The Situation."

And if he had? Prophets and soothsayers had a disconcerting way of speaking obscurely. Macbeth could testify as to that. Before the last act is over he makes it evident that he would have been better off if he hadn't consulted them.

The modern substitute for prophecy is business planning founded on facts that reduce the operation almost to a science. The author of these articles is with a concern that has for years buttressed its fortunes with careful

investigations of markets and intelligent deductions therefrom.

They knew, for instance, when backward states had passed the peak of their misfortunes and were come into their true inheritance. And they were ready with their products when the buying began.

Kansas is a state that has had more than her share of tribulations. Now look at her! Kansas is typical of other states and sections. The same deductions that would have shown her inevitable greatness while she was still in trouble can be applied now in other fields.

Read this story of Mr. Douglas with a mind open to suggestion.—THE EDITOR.

WHY has the state of Sockless Jerry Simpson and Middle-of-the-Road Populists come to be the commonwealth leading in per capita deposits and savings banks? Thereby hangs this tale—and here it is:

I have met many people in the ranks of farmers, workmen of all types, trainmen, retail dealers in the smaller cities and towns, and always professional men and mechanics of all descriptions who live much in the open air. I was once "put wise" to the story of the Kansas oil fields, their development and history, by a "driller" (the man who runs the drill in drilling for oil) whom I met casually in Hutchinson.

Another time, in a ride in a day coach from Wichita to Neodesha, I learned the story of the zinc mines in southeastern Kansas from a flannel-shirted, unshaven and unshorn mining engineer who occupied the same seat. Books are a good thing to begin with, especially those telling the history of the state and its people; then those about the topography and geology of the region and how the state government spends its money in the way of development, improvements and schools. But actual contact with the people themselves and actual facts in the actual territory—that is the beginning of wisdom.

In one of my trips through Kansas I noticed an increasing number of poultry, mostly chickens of fancy breed, where the "dunghill fowl" had once reigned. I saw small flocks of sheep upon farms. There were more silos than before. There was more livestock. There was much alfalfa. I was told that, at that time, a new species of corn, known as Kafir corn, was more drought-resisting than Indian maize and a sure forage crop often when Indian corn withered away because of the fervent heat.

So I went straightway to Wichita, where a great fair was in progress and a great display of Kafir corn. There, from agricultural experts, I learned the story of Kafir, why it was drought-resisting and why its increasing cultivation by the farmers of Kansas was one of the many evidences that agriculture in Kansas was winning its long fight against its inevitable portion in life of sometimes recurring seasons of hot winds and fierce, enduring droughts.

The history of Kansas, both political and

economic, showed me clearly that the people had gone through a good many serious crises and, at one time, from 1893 to 1896, were regarded by good, unknowing people in the country as being merely sublimated cranks. But, unless you allowed preconceived ideas and prejudices to blind your mental vision, it was perfectly obvious that the people of Kansas were desperately in earnest in whatever they undertook, and that idealism was their guiding star. Their low percentage of illiteracy, the statistics of education and the money spent for it, gave evidence of a people to whom education and intelligence were matters of vital import.

The state government agricultural reports disclosed a serious decline in crop yields, of late years, especially in corn, although the acreage under cultivation was as large as ever. A study of the weather records showed the coincidence of hot, dry summers with decreased crop yields. The conclusion was obvious and was confirmed by a trip to the State Agricultural College at Manhattan, where the weather bureau station had a record of precipitation and temperature for a number of stations in the state for a long series of years back.

No Hope for the Climate

THE only problem, then, was as to whether the Kansas farmer would learn the lesson of adapting his ways in agriculture to a climate which really did not change, only varied somewhat within certain observed limits, or whether he would keep on going up against fate, and keep on going broke, blindly clinging to methods of cultivation and the plants to be cultivated which were all right in a moist climate and all wrong in dry Kansas weather.

On one side were the education and intelligence of the farmer and the ceaseless teachings, backed up by convincing experiments of the Department of Agriculture and the State Agricultural College as to new ways to meet the situation as are set forth in this article. The other way only failure lay, as the grim past had shown only too plainly. It was an immortal cinch what would be the choice of the farmer, and how a new generation would adapt their ways and methods to those of often hostile nature.

The study of business possibilities in Kansas some twenty-five years ago was peculiarly dis-

tinguished by the absence of many of those factors which mark the likelihood of future development in most countries.

Those who, at that time, would have made a study of the future of Kansas from the conventional point of view would not only have registered their complete disappointment and disillusion, but later, in the days to come, would have realized how entirely they misconceived the real situation and its likelihoods.

For, to the casual observer, Kansas is not a picturesque state, nor one of great attractive scenery. It is not a land of babbling brooks, nor shady dells, for, in common with most of the Great Plains states, it is rather deficient in water in the form of lakes and rivers, and of forests and groves, compared with the states to the east and north. It is, in the main, a vast rolling prairie rising gradually from the eastern border to the Colorado line.

Under the Surface

IT HAS COAL in the east and southeast in large deposits. In the southeast there are great mines of lead and zinc, and a present large production of coal oil and natural gas. But the development of these underground resources has been largely within comparatively recent times. It has very large deposits, likewise, of building stones, limestone and sandstone, mostly in the eastern portion of the state. With the scarcity of forests there is but comparatively small production of lumber. Also manufacturing was in a minor key some twenty-five years ago.

Agriculture (farming and livestock raising) was then, and is now, essentially the most important industry of the people. Consequently the climate was, and continues to be, the keynote of the situation. Nor is it a climate of that constitutional and well-ordered nature largely prevalent in the states east of the Mississippi River. It is, in fact, a negation of all those sentiments which we of the Temperate Zone are apt to entertain as to the beneficent attitude of nature towards man.

They have a different conception and a different attitude in the Tropics, where bitter experience has taught them of the sinister and unrelenting hostility to man of animal and vegetable life, and of the weather against whose deadly influence he must forever be taking precautions lest he perish, for the

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TOLEDO
ATLANTA

DALLAS
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STRAIGHT LINE METHODS

climate of Kansas is by turns a blessing and a calamity. There are years when the clouds drop fatness, and years when, in the words of Elijah, "the sky is as brass and the earth as iron underneath."

The topography of Kansas, devoid of hills and mountains, and largely of forests, offers little resistance to those ceaseless winds following in the track of both the southwestern and northwestern barometric "lows" which move in regular procession across the state. But the land has abundant sunshine for its portion, thus adding much to its agricultural possibilities.

The real problem is the uncertainty of the rainfall. In the eastern portion the average precipitation is about 40 inches, decreasing progressively westward, until at the Colorado line, approximately a distance of 400 miles, it falls to 20 inches and less.

The summers of small precipitation are always those of extremely high temperature, 116 degrees having been recorded, often accompanied by hot winds which wither and destroy all living vegetation as with the breath of a furnace. The wet years and the dry years have a fashion, like most things in nature, of flocking together, after their kind, in two or three successive seasons.

During the wet years the farmers of Kansas raised great crops. But, when the turn came and the rains almost ceased, the farmers, especially in the western section of the state, usually went broke and tided over the hard times by being "carried" by the storekeepers and local bankers.

For a time, during the years of precipitation, there prevailed the current delusions, current even now, that the climate was changing, that rainfall was increasing, that planting trees and cultivating the soil produced greater precipitation. Meanwhile, pitiless Nature, who is no respecter of men nor their theories, had up her sleeve a bitter disillusionment for these dwellers in a Fool's Paradise, in the shape of an irregular, yet relentless, recurrence of those years of drought and misfortune which were the source of most of the troubles of the people of the state.

They saw the yield of wheat drop from 74,000,000 bushels in 1892 to 16,000,000 bushels in 1895 and corn from 138,000,000 bushels in 1892 to 66,000,000 bushels in 1894.

Finally, many farmers, especially in western

Kansas, gave up the unequal contest and, abandoning their farms, trekked eastward. So, in a number of counties, population declined, and business suffered accordingly. Two bad crop years culminated in the disastrous drought of 1894. Then followed the campaign for Free Silver, when Kansas, for the time being, cast all her former political idols to

Kansas suffered from the predatory exploitation of some railroad financiers to whom railroad management was merely a great game at the expense of the stockholders and the people. So the bitterness grew on both sides to an extent that took year, to assuage and remove.

Yet at this critical and tumultuous period, when misunderstanding and misconception on both sides was at its height, it needed but a modicum of common-sense and the study of experience to realize that the state offered in the future one of the surest and most profitable fields for business enterprise and expansion. The key to the problem lay entirely in the study of the people and the trend of their mentality. Their apparent adherence to certain theories, held to be anarchistic and revolutionary by the staid and conservative east, was merely a case of perverted democracy and idealism.

Kansas was then, as now, a commonwealth of farmers, and anarchy and social revolution never get very far with a farmer. He is a curious contradiction of radicalism as regards the social and economic problems which adversely affect his welfare, and is ultra-conservative on the score of landed property, which is his staff of life. Over and over again there have been associations of farmers who have startled the reactionary and conservative elements of the nations by the theories they advocated.

But nothing ever resulted from them, for these movements came to an end when the midsummer madness passed and the natural conservatism and good sense of the dweller on the soil asserted itself. Possession of property, especially farming property, from which one makes his living, is the one sure specific which renders the owner immune to anarchy and revolution.

Not only was the average Kansan a farmer, but he was likewise an educated man. Education has always been a name to conjure with in the Sunflower State. It is a commonwealth of readers. The actual attendance at schools has always been very high in proportion to its population, while the students at colleges, universities, and other higher institutions of learning rank higher in attendance per capita of population than any state in the Union.

Its percentage of illiteracy is the third lowest of any of the forty-eight states, despite the



That was the time when a famous editor declared Kansas was "raising too little wheat and too much hell."

the dogs and went hell-bent for sixteen to one ratio. That was the winter of her discontent, and the depth of her despair. But the sun of York was soon to rise, for it was the turning point and the beginning of the end of troublous times for Kansas.

It was at this time that the fortune of the state was at its lowest ebb. Kansas was a byword to the unknowing for mortgaged farms, discontented and distressed farmers and wild and impossible theories of government and finance. "What's the matter with Kansas?" was a current gibe of the times. Those were the days in which the farmers of Kansas were prone to follow the advice of their wives and "to raise more corn and less hell." Investment and capital fought shy of the state, because of its Free Silver proclivities and the retaliatory laws passed against outside investors and the railroads within the state.

As with most western states at that time,

St. Louis Invites Sixteen Industries



A GROUP of St. Louis business men smoked and chatted at their club. The conversation drifted to the one hundred new industries and fifteen million square feet of factory space built in St. Louis during the last two years; the General Motors Company's new \$5,000,000 plant; the United Drug Company's \$3,000,000 factory, and other new industries representing many millions of dollars and employing more than 14,000 workers.

As they talked, these keen business men began to realize the need of other types of industries to fully round out St. Louis as a well balanced trade center, ready to supply anything that might be called for over its industrial counter. A trade analysis convinced them that a wide market exists in St. Louis for many products not now made in St. Louis.

"The market is here, so why not bring factories here to make the goods?" asked one.

That started something. At a later meeting each man had a list of articles needed in St. Louis territory but bought elsewhere. "We need shoe findings," said a shoe manufacturer. "There's an immense demand here for steel and copper wire," said another. "Machine tools and drop forgings," chanted a third. The final count showed sixteen distinct types of industries needed to fill St. Louis' industrial gaps.

A banker, who had listened attentively, suddenly struck home with a proposition:

"Let's go after those sixteen industries we need. I'll contribute to an advertising fund to bring them to St.

Louis. Are you with me?" Within five minutes the fund was well up into the thousands. The municipality became interested and the City of St. Louis duplicated the business men's subscriptions, dollar for dollar.

This advertisement opens the campaign set in motion by those men of vim and vision. Here are the sixteen new lines of industry sought:

Shoe laces and findings
Cotton spinning and textile mills
Dye stuffs
Steel and copper wire
Machine tools and tool machinery
Automobile accessories and parts
Drop forge plants
Tanneries and leather products
Malleable iron castings
Farm implements
Rubber products
Screw machine products
Locomotive works
Blast furnaces
Cork products
Small hardware

Which of the above interests **you**? Would a Mid-West factory help solve your production and distribution problems? A letter will bring you details. Address it to

Director, New Industries Bureau

St. Louis Chamber of Commerce
 St. Louis, U. S. A.

large influx at one time of negroes from the south. Moreover, it was, and is, a country of idealism.

Nor could it be otherwise in Kansas, from their environment and history. In the beginning they came to a new land that happily had neither history nor precedent. They were not burdened with traditions, which are beautiful and picturesque in literature and art but too often mere millstones hung around the neck of social and economic progress. Means of communication were everywhere easy because the topography of the state offered no obstacles to road building. Local prejudices and provincialism could not thrive under conditions where there was constant and free intermingling of the inhabitants.

Judging a Community's Intelligence

IT STANDS first among the states in the percentage of mileage of all public roads to its area, and in the per capita ownership of automobiles it is close to the top. It is a curious and interesting fact, brought out by an exhaustive study of the automobile situation, that the percentage of the ownership of automobiles in any community or state is determined primarily, not by the presence of good roads and the possession of wealth, but rather by the intelligence and progressive spirit of its people.

There is something, moreover, in the unbroken stretch of the horizon and the endless sweep of the winds from the far distant Rockies that typifies the breadth and freedom of thought that characterizes the people of the state.

Long ago the inhabitants of Kansas were disillusioned as to an ever beneficent nature. They saw Nature in her true garb, sometimes kindly, sometimes cruel, and in all her ever-varying moods utterly indifferent to man and his works. So man's job, especially in Kansas,

was to measure Nature as to her laws which could not with impunity be violated, and those which could be met and overcome by adaptation to them. For the entire remedy lay in an agriculture which should be in accord with the climate and the soil.

The student of that day saw the answer clearly enough and the results which must follow when that answer was made. For a people so constituted would never rest till a way out was found. There were, in fact, four ways, all of them akin in purpose, and they came about in the slow process of time, largely with the aid and initiative of the Federal Department of Agriculture and the State Agricultural College. These ways were:

The use of dry-farming methods.

The cultivation of drought-resisting plants.

The employment of irrigation where possible.

The building of silos.

By these means Kansas agriculture was adapted to the ways of the climate.

Dry-farming is as old as agriculture, and was her handmaiden in the cradle of the race in the semi-arid Far East in the dim, historic past. The uttermost parts of the earth were ransacked for drought-resisting plants, the non-saccharine sorghum grains, Kafir, Milo and Feterita, Sudan Grass and Alfalfa. They were brought from the arid steppes of Mongolia, the burning plains of the Sudan, from the ages old desert of Egypt and from South Africa, where in the struggle for existence through countless ages they had survived as the fittest of plants to live and flourish where water is scarce and more precious than rubies.

Fortunately, in Kansas from 71 to 78 per cent of the total annual precipitation is in the crop-growing months, from April to September. So the acreage of winter wheat has been much expanded in the past score of years, because wheat matures and is harvested before

the months of July and August, when heat and drought most prevail.

Silos are the savings banks and reservoirs of feed for livestock to furnish them green and nutritious food through the winter and in the dry days when pastures are burned. Growing crops, threatened with drought, can be cut and safely stowed away in silos. This largely solves the problem of feed in the years of poor crops.

Because of the growth and practice of intelligent agriculture, there has been steady development in all the resources of the state. Fruit production on a commercial scale is an important industry, especially in the east and southeast. The vast fields of coal oil are being drilled and explored to the uttermost, and their great flows have added incalculable wealth to the state. Coal mining is a source of great revenue, and livestock, as a whole, is on the increase.

To the outside world there has come the belated and wondering recognition of Kansas as a commonwealth where business flourishes and savings bank deposits not only increase, but where independence of thought and speech, widespread education and intelligence, are earmarks of a progressive and prosperous people. These same people typify that economic truth that intelligence and education not only increase the demand for all the commodities of commerce, but likewise distinctly elevate the quality of that demand by a growing call for the things of worth and merit.

So the conclusion of the story of Kansas is of people who, in the time of their tribulation, pitted their native courage, resolution, and intelligence against the forces of an often hostile and destroying nature, and thus came out on top.

EDITOR'S NOTE.—This is the second of a series of character studies of the states by Mr. Douglas. The story of Wisconsin will appear in the June issue.

Little Stories of the Nation's Business

High lights in the swiftly moving drama of American Business finding itself after the shock of peace

Merchant Marine

NEW records of activity in shipbuilding for private enterprise are being made by shipyards in the United States, according to the Atlantic Coast Shipbuilders' Association of New York. Exclusive of tonnage building for the Shipping Board, 263 steel vessels, aggregating 1,256,573 gross tons, are in hand for business interests.

Steel merchant shipbuilding on a commercial basis in the United States is making steady progress, private shipyards on February 1, 1920, having 183 steel vessels of 791,911 gross tons for private shipowners under construction or under contract to build, compared with 165 of 679,170 gross tons on January 1, 1920.

A monthly steamship service has been established between the European ports of Coruna, Santandar, Bilbao, Havre, Antwerp, Rotterdam, and Hamburg, and the Mexican ports of Tampico, Vera Cruz, and Puerto Mexico, by the New York & Cuba Mail Steamship Company. A general cargo will be handled, and possibly at some future time passenger service will be added.

A line of six ocean-going vessels is now regularly employed in the trade between Beaumont, Texas, and Mexico. This line is the property of the Gulf Export & Transpor-

THE importance of these paragraphs is of inverse ratio to their length. They are culled from the business news of the month, and are boiled down to the very bone to make quick and easy reading. Among them are facts that can be applied directly to the opportunities and problems of your business.—The Editor.

tation Company, which first entered the Mexican business in 1915 and whose growth has been very rapid due to the intelligent manner in which they have handled their business.

The United States Shipping Board has established a special department in London to assist managing agents of its steamers in handling foreign business, and to aid and promote American commercial relations generally.

Freight rates on foodstuffs shipped to England on British vessels have been increased 30 cents per 100 pounds—from 45 to 75 cents. As the British Ministry of Food has 300,000,000 pounds of hog products in warehouses in the United States, this increase in freight rates means that the English public will have to pay \$90,000,000

more for these products alone under the new shipping rates.

Domestic Distribution

MARKET commissioners representing twenty states in annual convention in New York took the view that cooperation and elimination of superfluous middlemen would be the greatest single factor in bringing down the cost of living.

Efforts of the Government to check profiteering have resulted in 1,046 prosecutions under the Lever Food Control Act. Convictions have been obtained and sentences imposed in a total of 107 cases, according to Attorney General Palmer. In 754 additional cases indictments have been returned, and the accused are awaiting trial.

Bills providing for the marking of certain articles of merchandise moving in interstate commerce, and for the punishment by fine or imprisonment of the use of false or misleading descriptions in connection with such articles, are now pending before the House Committee on Interstate and Foreign Commerce.

More than \$13,000,000 has been realized from the sale of waste materials since the organization of the Salvage Division in the

LIQUID TRANSPORTATION

Hydrochloric (Muriatic) Acid

This powerful agent is extensively used in dyeing, bleaching, textile printing and many other basic chemical processes.

Specially constructed General American Tank Cars carry thousands of gallons of it annually. This is but another instance of "GATX" service reaching into widely different fields of industry, touching the daily life of the people at many points.

Standard makers

For twenty-two years we have been developing and perfecting methods of transporting liquids of all kinds—fuel, food, chemicals. We consider that the knowledge and experience of our engineers constitute a trust fund for the benefit of car buyers and users everywhere. Our consultation bureau furnishes expert advice without obligation. Write us now about your requirements. We build, repair and lease standard and specialty tank cars of every description.

GENERAL AMERICAN TANK CAR CORPORATION

General Offices: Harris Trust Building, Chicago

Plants at: East Chicago, Ind.; Sand Springs, Okla.; Warren, O.

Sales Offices: 17 Battery Place, New York;
24 California St., San Francisco



United States in April, 1918. Sales of surplus supplies made prior to the establishment of the Office of Director of Sales amounted to \$123,245,240, making the total receipts from sales to date \$724,280,707. In addition, material valued at \$39,540,898 has been transferred to other government departments without funds, at cost price, making a grand total of \$763,821,605 sold and transferred.

Industrial Production

THE demand for steel is said to be unprecedented. One producer from western Pennsylvania says that automobile makers are offering premiums ranging from \$40 to \$80 a ton for certain grades of finished steel. Order books are filled and consumers are experiencing difficulty in procuring material. A scarcity of cars adds to the difficulty.

A recent Tariff Commission report shows that the cost of producing dyes in the United States at the present time is from two to five times greater than were the German selling prices to American consumers before the war. It points out, however, that the American costs are a trifle lower in most cases than the prices at which German dyes were offered to the Reparation Commission, with the value of the mark at par. This does not mean much, it is true, in view of the present depreciation of the mark.

The demand in the United States this year will be for 57,000,000 automobile and truck tires is the estimate made by the Akron Chamber of Commerce. The demand is greater by 12,000,000 than the output last year, and all the great rubber factories are making enlargements to meet it.

The Canadian Pacific Railway will convert waste flax straw to paper pulp, it is announced from Ottawa. Canada burns 1,000,000 tons of flax straw yearly, which, under the new process, is equivalent to 100,000 tons of high-grade material to relieve the shortage.

Unofficial figures compiled from various sources indicate that, in 1919, 90 manufacturers of passenger automobiles and 170 builders of motor trucks in thirty-two states, employing 580,000 persons, produced approximately 1,586,787 passenger cars and 305,142 trucks, valued at \$1,807,593,829.

In spite of the fact that building and general construction work in the United States last year amounted to \$1,312,000,000, a record-breaking figure, the country is so far behind by reason of the slackening of the building program during the war that it will take several years to catch up.

The production of agricultural type tractors in the United States during the current year is estimated at 300,000. This compares with 175,000 turned out in 1919 and 7,450 in 1913, the first year in which the small agricultural type tractor demonstrated its efficiency and worth to the farmer.

Industrial Relations

AMERICAN industries dependent to any extent upon labor of foreign-born workmen will not be able even to replace immigrant workmen who are preparing to throw up their jobs in America and to return to their home lands at the current rate of immigration, according to Gen. Coleman du Pont, chairman of the Board of Interracial Council. General du Pont attributes many of the present difficulties of industry to the inadequate supply of new labor.

Government labor bureaus, operating in Alberta, Canada, last year, placed 30,018 men out of 40,180 applicants, and 3,381 women out of 4,668 applicants. The cost of placement was \$1.19 each, the province bearing 60.76 per cent of this and the Dominion the balance.

Japan is planning the establishment of a government bureau to deal with problems of industrial relations between worker and employer, patterned after the United States Conciliation Service.

Placements since January, 1918, have passed the 6,000,000 mark, it is announced by the United States Employment Service. During the same period 9,602,380 persons applied to the service seeking employment, while requests from employers for 13,831,030 employees were made. The cost per placement during the war and post-war period ending June, 1919, was \$1.34 each.

In a report of the Bureau of Labor Statistics on employment in selected industries, comparing figures for January, 1920, with those of identical establishments for January, 1919, it appears that in ten industries there was an increase in the number of persons employed, while in three there was a decrease. The greatest increases—54.2 and 51.0 per cent—appear in the men's ready-made clothing and woolen, respectively, and the largest decrease—24.9 per cent—is shown in car building and repairing.

A wage increase of 11.11 per cent for 11,000 refinery workers has been announced by the Standard Oil Company of Indiana.

Agriculture

THIS year's January potash production in Germany is said to be 550,000 tons, the greatest output of any month since potash was mined there, caused by the use of returned prisoners in the mines. There is a project on foot to import from the United States hard coal, as the potash, pottery and other industries have urgent need for this kind of coal, of which sufficient quantities are not available now.

A production of 15,250,750 bushels of wheat and 610,185 tons of wheaten hay is expected for the coming season of 1919-20 in South Australia, as compared with an actual production of 22,936,925 bushels of wheat and 426,147 tons of wheaten hay for the past season of 1918-19.

A total estimated yield of 5,668,000 bales of 400 pounds each is shown in the third official forecast of India's 1919-20 cotton crop, based on reports covering the entire cotton area of India, and relating to both the early and late varieties of cotton up to the beginning of December, as against 3,282,000 bales estimated at the corresponding date a year ago, or an increase of 73 per cent. As compared with the final estimate of last year, the present estimate shows an increase of 54 per cent.

Approximately 2,000,000 common barberry bushes were dug up and destroyed during 1919 in connection with the combined efforts of federal and state authorities to protect wheat against black stem rust which cannot survive unless it is able to spend one period in its life cycle on the leaves of the common barberry. The combined expenditures for this work were small in comparison with the size of the menace to wheat production by this disease, which, it is estimated, reduced the 1919 wheat crop by 53,000,000 bushels. In addition to this loss, there was a loss of 17,400,000 bushels

of oats and 4,700,000 bushels of barley due to the same cause.

Federal grades for wheat will not cease to be enforced under the United States grain standards act when the United States Grain Corporation ceases to function, although rumors to that effect have been reported. These rumors may be due to the fact that the grades went into effect at the beginning of the 1917 crop movement, at approximately the same time that the Food Administration Grain Corporation began its control of wheat marketing.

The American Consul General at Copenhagen advises that the potato surplus in Denmark amounts to about 2,939,467 bushels. The average selling price is 69 cents per bushel, f. o. b. Copenhagen. Cabbage is selling for 95 cents per 100 pounds. Some of this surplus is on its way to the United States.

The Department of Agriculture has Americanized the Easter lily by growing several hundred plants on its experimental farm, at Arlington, Va., from seeds produced on the farm instead of from bulbs imported from Japan and Bermuda, as is the practice of American florists. At the present time approximately \$250,000 is expended each year importing Easter lily bulbs.

Finance

THE Comptroller of the Treasury, instead of the Secretary of the Treasury, would compile the annual budget if a new bill providing for a federal budget system, introduced by Senator King, of Utah, is adopted.

The City Council of Paris has decided to float a municipal loan of \$20,000,000 in Canada. The proceeds are to be used for the purchase of foodstuffs and other essentials in the Canadian market.

Canada has placed an embargo on trading and stocks, bonds or other securities from countries outside of the Dominion. This drastic action has been taken by financial interests of Canada in order to protect the home security market.

Banking conditions in New Zealand at the close of last year were exceptionally good. The deposits in the six banks doing business in the Dominion amounted to \$221,766,283 as compared with \$171,791,557 at the close of 1918, and \$118,757,681 at the close of 1914.

Preliminary data on the foreign trade of Italy for the year 1919 give the value of the imports as 16,500,000,000 lire. A remarkable improvement in the balance of trade took place during the last six months, due to the reduction in imports and increase in exports.

More than \$4,000,000,000 of foreign securities have been sold to American investors since May 4, 1914, of which \$1,500,000,000 were offered by Great Britain, according to a Treasury Department report.

Charitable gifts are deductible from income-tax assessments to a total amount of not more than 15 per cent of the taxpayer's net income. The regulation governing this provision of the law has been amended to provide that where the gift is other than money the basis for calculation of the amount of the gift shall be the cost of the property, if acquired after February 28, 1913, or its fair market value as of March 1, 1913.

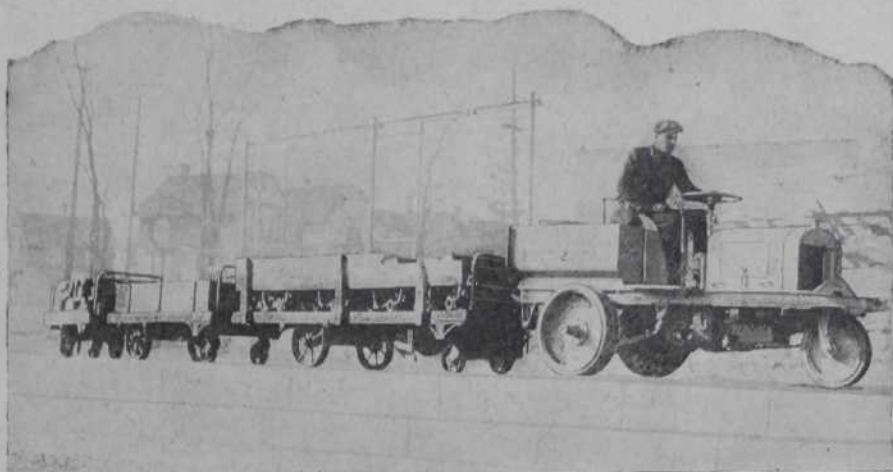
Throughout the entire Caribbean region, the National City Bank and the International Banking Corporation together now have a total of thirty-nine branches. The National



*The Gasoline
Industrial Truck*

CLARK TRUCTRACTOR

**Gives
Uninterrupted
Service**



A powerful, compact body of hustling energy, the Clark Truactor is a double-duty machine—a truck, a tractor.

It carries 2500 pounds of hot forgings, ice, core flour, wet concrete, brick, coal—whatever needs to be moved.

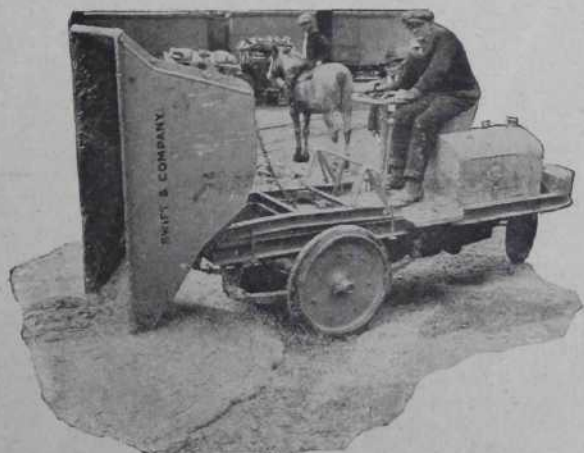
The Truactor delivers that load exactly where desired, and at the same time tows heavily loaded trailers. Several deliveries can thus be made on a single trip.

Gasoline driven, the Clark Truactor gives uninterrupted service. It works full capacity early in the morning—late at night—all the time, indoors and out.

Where prompt, continuous handling of materials is important, Clark Truactors give invaluable service.

*A letter will bring you an illustrated booklet showing
the Truactor's possibilities in your own business*

CLARK TRUCTRACTOR COMPANY, 1127 Michigan Ave., Chicago



City Bank has opened its second branch in Porto Rico at Ponce.

The adverse money exchange in the United States is costing Great Britain £25,000,000 pounds a year, which is more than the administrative cost of the entire country in pre-war times, says the *London Daily Mail*.

Negotiations for a loan of \$50,000,000 for the Polish Government in the United States have been completed, it is announced. The loan will be handled through the People's Industrial Trading Corporation, New York.

It is understood by the China press that the government has decided to establish the head mint of China at Shanghai, under the control of the currency commission, which has appointed a committee to purchase the ground and make the necessary arrangements.

Foreign Commerce

IN order that Bulgaria may derive the greatest possible benefit from the exportation of from 500,000 to 1,000,000 tons of grain, which was produced last year in excess of the needs of that country, a law has been passed putting exportation of all grain under control of a consortium formed by the National Bank and the Cooperative Bank.

The *Vossische Zeitung*, of Berlin, says that the Potash Syndicate has booked American orders amounting to \$50,000,000 for potash, and that deliveries will be extended over a number of years.

The Moving Picture Exhibition of British Industries (Ltd.), whose plan for showing the world how British industries manufacture goods was necessarily delayed by the war, has resumed its activities. While its ultimate purpose is to widen the markets for British products, it will put distant buyers in direct touch with British manufacturers of those products which they most need. Foreign buyers will be able to see with their own eyes how the goods they buy are produced. The explanatory matter on films is in four languages, English, French, Spanish and Portuguese.

Exports from Hongkong to the Philippine Islands for 1919 showed an increase over the exports of the previous year, the total for 1919 being placed at \$7,404,980, as compared with \$6,739,044 for the preceding year.

French exports to the United States in the first month of this year were five times greater than those in the same month last year. Figures were respectively \$15,000,000 and \$3,000,000.

The salt industry of Inagua, Bahamas, is being revived by American capital, operating under the name of the Inagua Salt Company. The work is already under way, and it is estimated that Inagua will soon be exporting 3,500,000 bushels of salt a year to the United States.

The *Wall Street Journal* says that the sales of automobiles in Canada last year totaled \$100,000,000. In 1919 Canada produced 94,000 cars, and the output for 1920 is expected to show an increase of 35 per cent.

The high price of English and American coal, together with transportation difficulties, says Commercial Attache Dennis, at Rome, have caused the Italians to turn their eyes toward Asia Minor as a source of coal supply.

Because of a huge falling off in its nitrate trade, Chile's deficit for last year aggregates \$18,000,000. Chile expected to export in 1919 about 2,500,000 tons of nitrate, but actually shipped only 900,000 tons.

Cabbage from Europe, peanuts from Asia and onions from Spain are among imported articles competing for the taste of Americans these days. The Department of Agriculture has announced that better conditions of ocean freight and rates of exchange have made possible their reappearance. Spanish onions have sold in American markets at considerably lower prices than the native stock, it is declared, and cabbage from northern Europe at about two-thirds the prices of best domestic stocks. The Asiatic peanuts undersell somewhat the native product.

Nearly a billion pounds of condensed milk were sent out of the United States in 1919, at an export value of about \$125,000,000, and were distributed to ninety countries, colonies and islands of the world.

There are no import prohibitions on luxuries in the Scandinavian countries, but their importation is restricted through control of exchange. In Denmark and Norway the exchange councils refuse foreign exchange except for the purchase of necessities. In Sweden, where there is no exchange council, the government is urging bankers to refuse exchange for the importation of luxuries.

Owing to the shortage of wheat, maize, and wheat flour, the import duties on these commodities have been temporarily suspended in the Union of South Africa.

The Japanese have not only captured the German trade in the South Pacific Islands, according to press reports, but also have almost completely superseded the British, who formerly did a business there worth over £200,000 a year. It is said that every article on sale in the Marshall Islands is of Japanese manufacture, ranging from needles to anchors, biscuits to sewing machines, jewelry to all classes of European wearing apparel, all adapted to please the native tastes.

A special type of cultivator to meet the peculiar needs of the country would doubtless find a ready sale in Peru. The agriculturists along the Peruvian coast are especially prosperous at present because of their success in selling products at high prices during the war, and are consequently able to buy machinery and implements more freely than in the past.

More than 2,000,000 tons of freight passed down the Neches River during the calendar year of 1919 from the port of Beaumont, Tex., to the markets of the entire world, including Mexico, England, Portugal, Italy, China, Japan and a 10,000-ton boat recently left the harbor loaded with oil products for Hamburg, Germany. The principal products exported are oil, lumber, and rice.

Secretary Alexander, of the Department of Commerce, says that at least \$1,658,420 will be needed to finance foreign trade plans formulated by the department for next year's activities. Efforts to aid development of American foreign trade next year will be redoubled by all federal agencies.

Railroads

WALKER D. HINES, Director General of the Railroad Administration, has been designated by President Wilson as the agent of the Government against whom actions of law, suits in equity, and proceedings in admiralty which might arise from government control of railroads should be directed.

The first two weeks of private operation proved to the heads of a majority of the railroads that the \$300,000,000 fund provided in the Transportation Act to meet financial

requirements for roads in the transition period is not quite half of what they need.

The Canadian National Railway will probably be the most extensive system in the world, with a total mileage of 21,213, as a result of acceptance by the stockholders of the Canadian Government's offer to nationalize the Grand Trunk and the Grand Trunk Pacific.

Samuel O. Dunn, editor of *Railway Age*, is the authority for the statement that the increase in freight business in this country since the year ended June 30, 1915, has been 57 per cent and the increase in passenger business 32 per cent, each being almost as great as it was in the previous decade. If the new investment had been as great in proportion to the traffic during the last five years as it was during the preceding ten years, it would have been about \$5,000,000,000. As a matter of fact, it has been less than \$1,900,000,000.

During the two years of federal operation, the carriers were furnished with 100,000 freight cars; but during the same period there were retired, owing to depreciation, wrecks, etc., 92,000 cars, a net gain to the country's freight equipment of only 8,000 cars, with an increase in the country's production offered for transportation variously estimated at from 25 to 50 per cent. The car shortage will continue to handicap business until new cars can be built.

The first change that business men noticed in the railroad situation, after the lines went from government to corporate operation, was the activity of freight and passenger representatives who were endeavoring to perform a personal service for their patrons. This service has been lacking since the last day of December, 1917, and the change is appreciated.

The public utility commissions of Arkansas, Oklahoma and Missouri have formed the Southwestern Utilities Commission for the purpose of promoting a more uniform control of public utilities, particularly the railroads. Commissions of other states have been invited to participate.

A new stretch of main line track, 209 miles in length, on the Chicago, Milwaukee & St. Paul Railroad, is now completely electrified, making 649 miles in all. The electrification is confined to the high mountain ranges in Montana, Idaho and Washington.

Yoshisato Hisatome, secretary of the Imperial Government Railways of Japan, is in this country studying terminal facilities at the larger cities with a view of making a comprehensive report to the director of Japanese railways.

Government railways in Canada, including the recently acquired Grand Trunk lines, will be operated at an estimated loss of \$30,000,000 during the coming year, according to reports current in Ottawa.

The United States Senate recently adopted a resolution, offered by Senator Jones of Washington, requesting the Secretary of the Interior to furnish complete details pertaining to the construction and operation of the government line in Alaska.

Edgar E. Clark is the new chairman of the Interstate Commerce Commission, which is now acting under enlarged powers provided for by the Esch-Cummins act.

The Wichita Falls, Ranger & Fort Worth Railroad, a line made necessary by the tremendous increase in freight traffic in the



QUICK GET-AWAY

The efficiency of the Clark Axle is exceptionally high at the "take off"—it is built on the internal gear drive principle.

This high efficiency (92%) at low speed is a valuable consideration in truck construction—equally so in crowded city traffic and on heavy rural roads.

Clark Steel Disc Wheels make good motor trucks better—for solid or pneumatic tires

Clark Equipment Company
Buchanan, Michigan

Atalanta, daughter of Schoeneus, was the swiftest of mortals; quick of mind and strong of limb she leaped to the fore at the "take off"

of every race, holding the lead to the goal because she wisely utilized every ounce of her strength—SHE WAS BUILT RIGHT.

James
Cady
Ewell

**CLARK
EQUIPMENT**

petroleum fields, has completed construction of its line in northern Texas and trains are now in operation.

The Pennsylvania Railroad has offered to buy more than 6,000 freight cars allocated to various lines by the railroad administration and which are not wanted by those railroads.

In December of last year one passenger train out of six was late in reaching its final terminal. The number of trains thus delayed amounted

to more than 50,000, and the roads have begun a movement to remedy the trouble.

Due to the strike of express handlers, clerks and teamsters of the American Express Company, which was unauthorized by their international union, parcel post facilities in Chicago were almost paralyzed in March.

Radio telegraph facilities have been installed on the Louisville & Nashville Railroad at its general offices at Louisville, Ky., and it is pre-

dicted that radio communication will be regularly established between general and division offices of the line.

On account of the shortage of freight cars in the United States, the railroads are not returning cars to their Canadian owners as rapidly as desired, according to the Railway Association of Canada, which has placed an embargo on the sending of Canadian cars across the border.

U. S. Steel and the Nine Judges

The prevailing Supreme Court justices conclude that they would perform no service to the public by dissolving the corporation and placing the industry back where it was twenty years ago

THE public interest has been given new importance by a minority of the United States Supreme Court. That is the result of the court's decision in the suit to dissolve the United States Steel Corporation. Four of the nine judges united in the decision; three dissented, and two refrained from participating, one because he had been Attorney General and as such had something to do with the case at an earlier stage, and the other probably because of positions he had taken regarding the case before he became a member of the court. Under these circumstances, the particular case may be ended, but perhaps the final conclusion of the Supreme Court in the question of law has not been reached.

As things stand, however, the Supreme Court held that the public interest is of "paramount regard in submission to the policy of the law and its fortifying possibilities." This carefully chosen and condensed language marks both the majority and the minority opinions and may be indicative of unusually earnest and protracted discussion evoked by the case among the judges in their conference room. Such discussions might account in part, too, for the clear distinctions between the opinions of the majority and the minority.

According to the majority, the corporation was on trial as it existed in 1911, when the Government began its proceeding, and in the subsequent years. Whatever the original motives of the persons who formed the corporation, their wrong intents could not be executed; instead of succeeding in any purposes of monopoly, they had seen the percentage of output by independent concerns increase and they could not control prices; before the suit was brought any attempts in these directions had been discarded.

This was a controlling circumstance with the majority of the judges, who said: "We have seen whatever there was of wrong intent could not be executed, whatever there was of evil effect was discontinued, before this suit was brought, and this, we think, determines the decree."

Seeing clearness in the Sherman Act, these judges set out their conception of the duty of the court in the words: "but the command (contained in the law through its direction to the courts to prevent and restrain monopolies) is necessarily submissive to the conditions which may exist and the usual powers of a court of equity to adapt its remedies to those conditions." In other words, when a court of equity is asked to issue an injunction or to decree a dissolution of an organization alleged to be illegal, but which is not charged with

present acts in violation of law, the court will consider the public interest as it would be promoted or impaired by its decision. This, the court believes, is not an attitude advancing "a policy contrary to the law, but in submission to the law and its policy, and in execution of both."

This is a clear statement upon the question which has now for about five years been at issue. One lower federal court had held that the mere fact of combination was illegal and warranted an equity court in ordering a dissolution, although no results detrimental to the public on account of the combination were shown. Another lower court had said there was no illegality unless monopoly, methods of unfair competition, or other evil effects appeared.

The three dissenting judges of the Supreme Court emphatically agree with the Department of Justice in saying that the mere fact of combination is illegal. According to them, in the organization of the corporation there was violation of law and at any time proceedings are brought the court should order dissolution.

In the opinion of these judges, that there was violation of the Sherman Act in 1901 and the years immediately following, the four majority judges might not agree. If they did not have the position that they were considering only the condition of affairs since 1911, they intimate they would take economic considerations into account in testing the original creation of the corporation. Referring to the more adverse opinion expressed in the lower

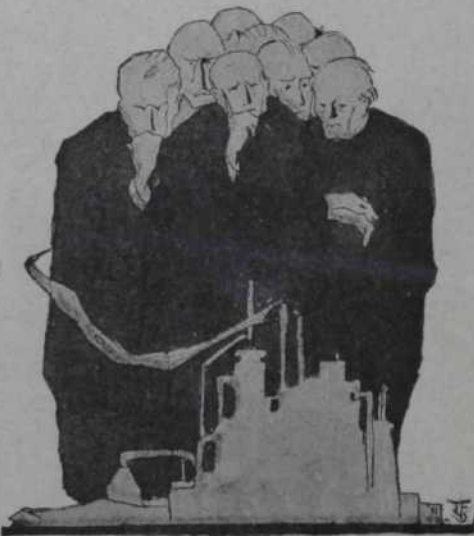
court—that the corporation was formed to monopolize and restrain trade—these four judges said they concurred in the main with that point of view, but added that this opinion "underestimated the influence of the tendency and movement to integration, the appreciation of the necessity or value of the continuity of manufacture from the ore to the finished product. And there was such a tendency, and, though it cannot be asserted it had become a necessity, it had certainly become a facility of industrial progress. There was, therefore, much to urge it and give incentive to conduct that could accomplish it. From the nature and properties of the industry, the processes of production were something more than the stage and the setting of the human activities. They determined to an extent these activities, furnished their motives, and gave test of their quality, not, of course, that the activities could get any immunity from size, or resources, or energies, whether exerted in integrated plants or diversified ones."

The Conclusions

IN conclusion the prevailing judges said they could not see any service to the public interest through dissolution of the corporation but, on the contrary, perceived in such a course a risk of injury. This risk they apparently perceived in the return of an industry substantially to its condition twenty years ago, jeopardy of investments made by the public in the ten years before the Government began proceedings, and material detriment, if not serious injury, in foreign trade.

The case may mark a new period for us—a period when combination which does not bring the evils of restraint of trade and monopoly, but makes possible economies in production, may be considered lawful and in the public interest. England long ago attained that point of view, possibly because of the importance of her foreign trade and the necessities of competition in foreign markets. The fact that the majority judges in the Steel Corporation case refer to American foreign trade may lead one to wonder if our changed position in foreign trade has had a corresponding influence upon legal thought in the United States.

The Steel case was but one of a number which are before the Supreme Court and involve the Sherman Act. In the result of the Steel case, the Department of Justice finds no cause for dejection; it takes the position that the case was decided upon its particular set of facts. Perhaps in handing down decisions in the other pending cases the Supreme Court will in the near future extend still more our understanding of the anti-trust laws.



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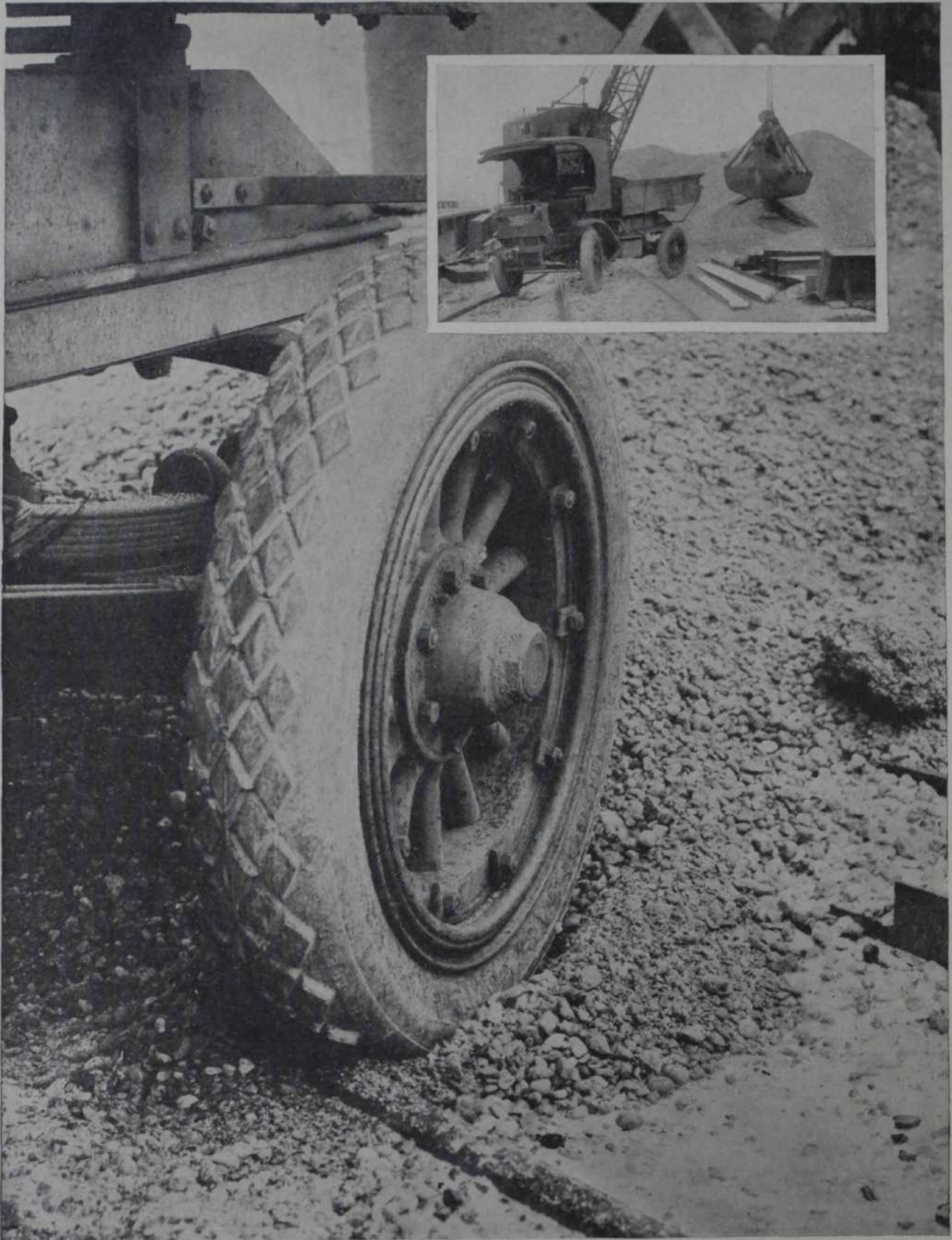
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Un-retouched photograph showing conditions encountered by Goodyear Cord Tires in excavation and foundation work for the Federal Reserve Bank at Richmond, Virginia; George, Hankins & George, Contractors.

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GOODYEAR

For Savage Toil or Easy Hauls —The Big Pneumatics

"The truck on Goodyear Cord Tires makes more trips, hauls more yardage out of excavation than any solid-tired unit, although limited by a hand dump body—uses less gasoline—depreciates much more slowly than solid-tired trucks one-half its age—and despite rocks, cinders, scrap iron, splinters, nails and hoops, the Goodyear Cord Tires are outlasting solid tires in this work."—J. F. Powers, Motor Truck Foreman, George, Hankins & George, Excavating Contractors, Richmond, Va.

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CORD TIRES

Commerce and the Chemist

Financial backing and government encouragement are fortifying the industry that brings forth its products through processes as mysterious as those of the ancient alchemist

By WILLIAMS HAYNES

Publisher of "Drug and Chemical Markets"

FIVE years ago conservative American bankers and investors regarded the stock of a new chemical company about as favorably as they would have entertained the exportation of green cheese to the moon. Then, but few Americans knew anything about the business of making chemicals, and to many a chemist was either a superior sort of druggist or a college professor who specialized in the least practical of the sciences. The energetic, hard-headed, practical American business man had no time for bad smells and fine theories, which were apparently chemistry's stock in trade.

The results of chemical reactions certainly appear to be quite magical. To produce a dry powder by passing a gas through a liquid seems as clever a trick as drawing a rabbit from a silk hat. Chemists talk a strange language and write cabalistic symbols—the mysteries of alchemy still surround them. The medieval belief in the transmutation of baser metals into gold persists in the modern expectation that high-priced products can be made by chemists very simply from cheap raw materials. No substitute for gasoline can be produced by boiling straw in sea water, and if it could, the price of straw would advance and the price of motor fuel would decline so that the profits would cease to be exorbitant.

It is true that chemists have discovered many processes which have reduced the cost of manufacturing many things, from steel rails to match tips; but the inevitable economic result is that the selling price of these goods is sooner or later lowered, so that the increased profits must come eventually from increased consumption.

Aluminum off Its High Horse

ALUMINUM is a good example. In 1883 the world's total production was only about a hundred pounds which sold for about \$400 a pound. An American chemist, C. M. Hall, invented a process for the separation of this metal from one of the commonest rocks. In thirty years the price dropped to 20 cents a pound, and the consumption in this country alone reached the astonishing total of over ninety million pounds. A rare chemical curiosity has become a common metal used for making all sorts of things, from saucepans to aeroplane parts. Chemical manufacture is a real and matter-of-fact industry, governed by the familiar laws of supply and demand and of diminishing returns, an industry in which extra profits, in normal times, are earned, as they are elsewhere, by superior management. The thrilling romance of dollars and chemicals proves after all to be a straightforward business partnership.

One of the strongest points of the chemical industry is its peculiarly basic character. Every government places chemicals on the list of "key" or "pivotal" industries, necessary to national prosperity and, in event of war, essential to national preservation. Chemistry is the universal science of the in-

CHEMISTRY is modern magic.

Our great industries such as steel, leather, rubber, paints, glass, textiles and the like are made possible by the tons of chemicals that leaven their processes. You may have thought of chemistry in college as the science of bad smells and paralyzing coefficients—but today, shoved into the spotlight by the demands of peace, we realize that it is a solid, matter-of-fact business. The average capitalization of chemical companies in our country has increased fivefold. Big financial interests are assisting in their reorganization. There is a special heading of "Chemical Stocks" in your morning paper. "The universal science" has at last come into its own.—THE EDITOR.

dustries; every industry must have chemicals or materials that have been chemically treated.

The vast industries that produce our fertilizers, our steel, leathers, rubber, metals, paints, glass, and all textiles buy tons of chemicals as part of their necessary raw materials, while every day fifty thousand druggists and two hundred thousand grocers sell hundreds of different chemical products by the ounce and the quarter pound. If the civilization of a people may be judged by the quantity of soap they use, then the state of a nation's industries can be measured by the consumption of sulphuric acid. This "old horse of chemistry" is as necessary to manufacture as oxygen is to life, and its price and production are a broader and more accurate gauge of industrial activity than is the consumption of steel or coal. Moreover, the chemical industry produces essentials for the arts, medicine, and agriculture; and although no chemical company satisfies more than a fractional bit of this universal demand for chemical products, nevertheless the customers of all the large chemical plants are in many different lines and make many different uses of their chemical purchases. These are the broad foundations upon which the chemical industry is raised.

Its widespread demand gives the industry great stability. This stability is evidenced by the even average of monthly production in the chemical factories. During the last normal year, 1914, the minimum number of wage-earners employed in American chemical plants during the dulllest month was 97.1 per cent of the maximum number of workers in the busiest month. Obviously, the making of chemicals is not a seasonal business.

Another characteristic of the chemical in-

dustry, however, disturbs stable conditions. This industry is basically one of progress, and this progress is not confined to improved technical methods and new machinery, but includes also changes in the products manufactured. This condition is always present and cannot be avoided. It is, moreover, a condition that is little appreciated by the very bankers and investors who are furnishing the capital for the expansion of this growing industry.

Most manufacturers can perfect their manufacturing processes, and in this way either improve their goods or increase their production, confident of their market. The maker of textiles, for example, can build additions to his plant and buy improved machinery, knowing that no new cloth will be discovered which will quickly and completely replace his calicoes or his woollens. In the chemical industry there can be no such confidence. Even in the case of those technical chemicals which are as staple as wheat—the heavy acids, ammonia, alcohol, caustic soda, bleaching powder, and others—there is always the possibility of a new process that will use cheaper crude materials, or increase the yield, or obtain new and more valuable by-products, and accordingly vitally affect costs, so that old methods will be forced out of effective competition.

Victims of Progress

EACH year these improvements in processes are being perfected, and they often bring about revolutionary changes; but they are easy to meet compared with the discoveries of new chemical substances which replace other chemical products. Many coal-tar dyes have been perfected that have made other dyes, and even whole classes of dyes, as obsolete as the Tyrian purple made by the Phoenicians from sea shells. In the field of the medicinal chemicals, progress of this kind is common and often bewilderingly rapid. Aspirin has largely replaced phenacetin, which in turn replaced salol.

In the United States both new methods and new products may be protected by patent, and these double patent rights are on both the process of manufacture and the substance made—and this is the only nation which grants patents on products. In the chemical field, especially, this very perfect patent protection creates special opportunity. A patent upon a new chemical substance grants an absolute monopoly. These unique monopolies, created theoretically to stimulate American chemists and manufacturers, in practice enabled German chemical corporations to exploit us to their own exorbitant profit. It is a rare bit of irony that we paid 28 cents an ounce for aspirin when the same German manufacturers were selling it to our neighbors in Canada for 3 cents an ounce.

Now that we have broken the grip of the German chemical trusts and adopted measures that will prevent the abuse of our patent

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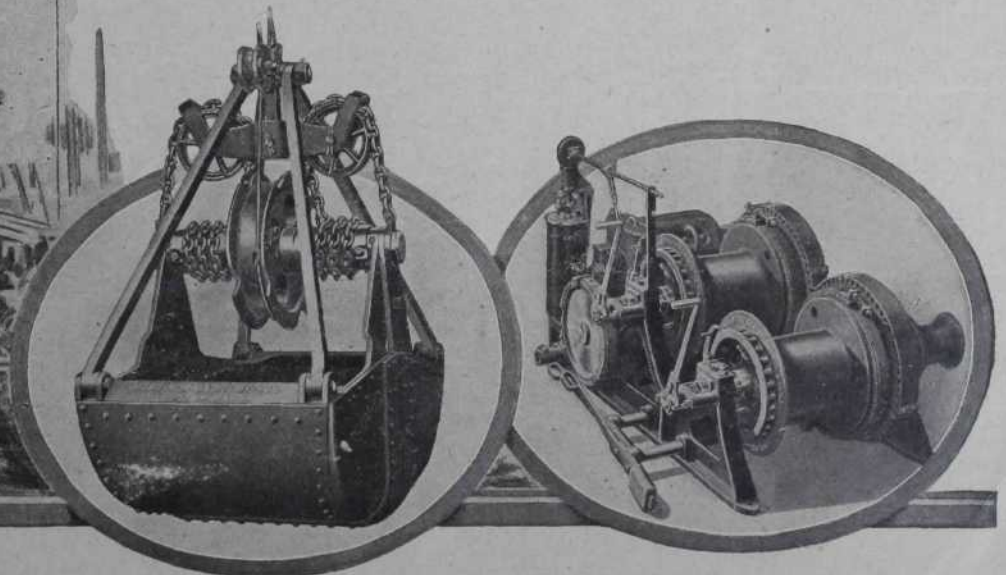
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laws, there is no reason why we should not hold out the inducements of protection for both new chemical substances and new processes to our own chemists. These inducements create a monopoly that cannot be broken even if another way of making the same substance is discovered; but product patents are so fixedly a part of our liberal patent policy that they will probably always be recognized. Inventive genius is not lacking to American chemists. Great improvements in the methods of obtaining nitrogen from the air are the result of American work. Four new methods of making acetone—two of them will doubtless be used commercially—have been perfected in America. A process of making nitro-starch, a necessity of the munition industry, from cornstarch in place of tapioca, was developed by an American chemist. Even the fields of Germany's boasted superiority have been invaded, for had the war lasted a few months longer the Allies would have employed a new, most deadly poison gas, invented by an American, and several aniline dyes are now on the market made by new processes discovered in America. Our patent laws will encourage much more work of this kind, and inventions of processes will play an important part in the relations between American dollars and American chemicals.

The Jugglers

THE double progress in new products and new processes inherent in the chemical industry forces constant changes upon the maker of chemicals. Compared with the maker of cloth or steel, a chemical manufacturer is an industrial juggler, and the joking statement that he makes his profits out of his by-products is often literally true.

These conditions are favorable to big companies operating big factories. Large plants can make diversified products most economically and work over by-products most efficiently. Big companies can command capable executives and aggressive, trained salesmen.

Chemical progress is made possible by skilled chemists working in well-equipped laboratories, and most commercially valuable discoveries are the result of long series of patient experiments. The equipment of a chemical plant is expensive, and changes are often costly. Only a giant can juggle cannon balls, and in the chemical industry the large, strong company has its smaller competitors at an initial disadvantage. Even before the war, the tendency towards concentration in the American chemical industry was marked. In 1909 there were 12,060 chemical establishments with a total capitalization of \$2,167,-

425,000; in 1914 there were 12,374 plants capitalized at \$3,034,209,000. In five normal years the average capital had increased from \$170,000 to \$260,000. During the same period the average number of workers increased from 22 to 39, while the average

ous. Our chemical industry must broaden and deepen its foundations. A burden of over-capitalization would bear heavily upon it, and nothing is more inimical to its future than stock jobbing, promoted by the present popular interest in chemical companies, followed by stock speculation.

The Way of Bond Lotteries

PREMIUM BONDS, or rather the mere suggestion of them, kicked up a lively controversy in England. All Englishmen like a sporting chance, but about this particular kind of chance there was no lack of variety in individual British opinion.

The plan for premium bonds was fairly simple. The bonds would bear interest at 3 per cent. The difference between 3 and 5 per cent would go into a fund to be distributed among the bondholders through a lottery. The advocates of the scheme thought that more Englishmen would be allured into buying three-per-cent bonds with a chance for a "bag of money" than into investing in plain, matter-of-fact five-per-cent bonds. Some of the opponents condemned any gambling feature and others declared that since a man with three-per-cent bonds would get only around 60 if he has to sell, the men who buy the greater part of every issue would have nothing to do with the new offering. The conclusion reached by the House of Commons last year was that England had best have nothing to do with premium bonds.

Lottery bonds caused no qualms in Germany. An attempt has just been made to fund the floating debt. Artificial inducements were considered necessary to attract purchasers for the new issue. The first inducement, however, was not part of the lottery; it was a chance to pay half the cost of a new bond in bonds of the German war loans.

The issue offered was for 5,000,000,000 marks, or approximately \$1,250,000,000 when the mark is at par but about \$150,000,000 at recent values of that coin in terms of our money. The loan is for 80 years, and there is provision for amortization.

Subscribers will get no interest checks and no coupons to cash; for these bonds are like our war savings certificates in that a holder is to get his interest, not less than 5 per cent when he receives payment of the principal of the obligations he holds. If his bond for 1,000 marks is drawn for payment at the end of 10 years he will receive 1,500 marks, and if it does not appear in the drawing until the eightieth year he, or his descendants, will have 5,000 marks.

The lottery features were meant to be irresistibly attractive. They call for a drawing every six months. In each drawing there are to be 2,500 winning bonds.



Most discoveries are born of long and patient experiments in the laboratories of big companies.

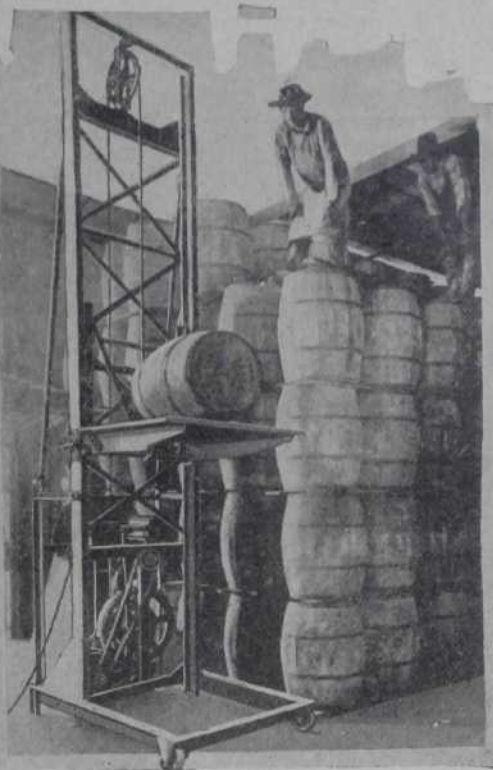
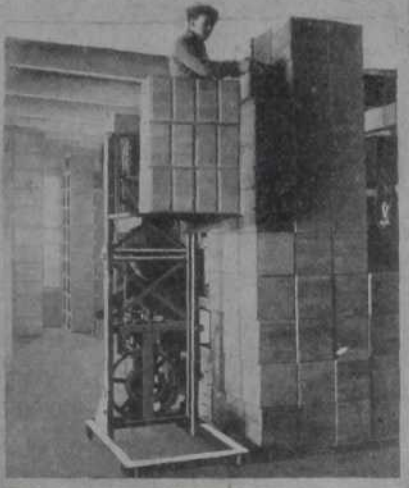
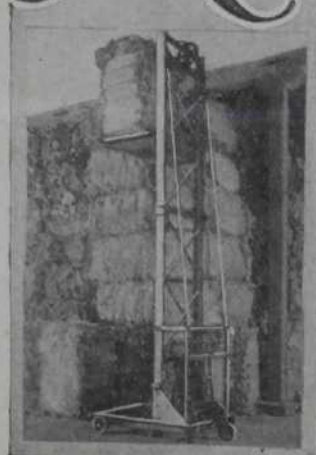
horsepower nearly doubled, advancing from 17.3 to 30.9. At the same time, the value of the products increased from a billion and a half to over two billion dollars, making the chemical industry our fourth largest in value of products, following foodstuffs, steel, and textiles; ahead of lumber, paper, leather, metals, and vehicles, including automobiles.

These figures surprise those who think of chemicals as a war-made industry. The war merely accelerated the growth of this industry and stimulated the tendency towards centralization. Since 1914, as well as one may judge without official statistics, nine billion dollars have been invested in various chemical manufacturing enterprises, but it is doubtful whether the number of concerns which have been successfully established on a permanent basis has trebled.

Big financial interests have assisted in the recent reorganizations of several large chemical corporations, and as usual these reorganizations have meant increased capitalization. Often this is wise and necessary: always, in the case of chemical companies, it is hazard-



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ECONOMY SYSTEM of STORAGE HANDLING

The Tax on Prudence

Regarded by "practical" legislators as bottomless reservoirs of cold capital, the insurance companies are beset by hordes of tax collectors—and the man with the policy pays

By H. A. SMITH

President, National Fire Insurance Company

HAVING recently completed returns for federal income and profits taxes, a good part of the population of the United States should be in a mood to sympathize with the business which is probably assessed with a greater variety of taxes than any other in the country. This is insurance. A real fire insurance company—one that has grown to the size which permits distribution of the risks of loss in the way the science of insurance contemplates—is taxed four ways by the Federal Government, by pretty close to forty-eight ways in the states, and for good measure by cities, towns, and fire districts. Such companies have to maintain legal staffs to keep up with their obligations under taxation laws, and in addition their central organization uses a large part of the time of its attorneys to help out on this multifarious and never-ending job.

All of this reads as if the companies—distant, impersonal, and legal fictions possessing nothing but cold capital, in the minds of some thoughtless people—had to pay pretty heavily to tax-gatherers whose numbers ever increase. That is where a practical joke comes in.

The Point of the Joke

NO business is so cooperative as insurance. The man who buys protection for his interests against the hazards of fire pays the costs of the protection he gets, and the costs include those selfsame taxes. If he did not pay the costs of insurance, the companies would go into bankruptcy, and his policy would in truth be a scrap of paper.

This source of revenue was discovered by Lord North more than a hundred years ago, but the possibilities of its yield have been recognized in more recent times. It is one of the easiest taxes to collect, by the extremely simple process of calling around at the insurance company's office, and, being indirect for the real taxpayer, it is extracted without the policy-holder being aware of what is happening to him. Very naturally, such a tax is dear to the heart of every practical legislator.

To be sure, the recent trend has been to jerk indirect taxes out into the daylight. Provident policy-holders may then discover that they are yielding up to government some pretty heavy taxes from which their happy-go-lucky neighbors are scot-free. They may conclude they do not relish an order of things in which, when they render a service to their community by getting an indemnity against fire, they pay a tax for their prudence. By assuring their stability in business against the risks of fire—really a patriotic thing to do—they in fact go around and pay tribute to the sovereign as a demonstration of penitence for being good citizens. They have smiled at some of the vagaries of foreign taxation, such as the whimsical French tax upon the number of windows in which a man indulges, and have had a comfortable feeling that no such things could come to pass in an enlightened country like their own, and all the while they have been paying a tax that is reminiscent of the middle ages. Their present

tax usually applies even on the money which is used to pay the actual losses caused by fire.

At the beginning of the modern period for exploitation of this source of taxation something was said about the insurance business paying the expenses of the states in regulating it. But the collections long ago outran the costs of regulation, and insurance taxes have become a source of general revenue. In 1917 state insurance departments collected from insurance companies \$18,200,000. Their own expenses were \$1,944,000. The addition to the general revenues of the states was \$16,255,000.

The victims of most indirect taxation remain unconscious until they feel a sharp and inexplicable pain in their pocketbooks. Thereupon, they react violently and without method, but sooner or later perceive the object at which to direct their wrath.

The question is whether or not taxes have now risen to the point where policy-holders will begin to react. One state today exacts in taxation 50 per cent of the premiums received within the state by its home companies, but that levy happens to be softened for local policy-holders because the companies of other states doing business there vastly outnumber the local companies and, being taxed but 2 per cent of their premiums in the state, hold rates to the level calculated to yield to them a fair margin of profit rather than the level required to yield a similar profit to the home companies. The latter, bearing such an excessive burden at home, are not able to recoup themselves in other states, as they cannot collect higher rates than their competitors which are not thus

penalized. So this extraordinary tax impost acts as a constant handicap upon the home companies and their stockholders, mostly residents of the state, as there is no way to absorb the tax which these companies pay, so long as the tax remains, and consequently they are compelled to operate at a disadvantage in competition with the companies of other states.

The taxes of one kind and another paid in 1918 by fire companies reporting to the State of New York were \$27,966,000. The portion of this amount paid by stock companies—the only ones, of course, that have capital—equalled 18.6 per cent of their capital. Stated in another way, 4.5 per cent of every premium paid for fire insurance in 1918 was a tax. That is just about the part of the price of a 50-cent cigar which the Government takes as its own, under prevailing war taxation constructed on the theory that cigars, especially 50-centers, are dreadful luxuries.

Without doubt insurance taxation was heavier in 1919 than in 1918, but the figures showing the results are not available.

The taxes themselves are but part of the cost. It takes real money to pay for the expert and clerical staffs that keep up with the multitude of tax statutes and the constantly shifting regulations under which they are applied. Altogether, before the policy-holder has finished with indirect taxes he has to pay these days, he will find that these taxes—with the principal ones levied in his own state—play a real part in his "high cost of living" when he comes to pay the bill for his insurance.

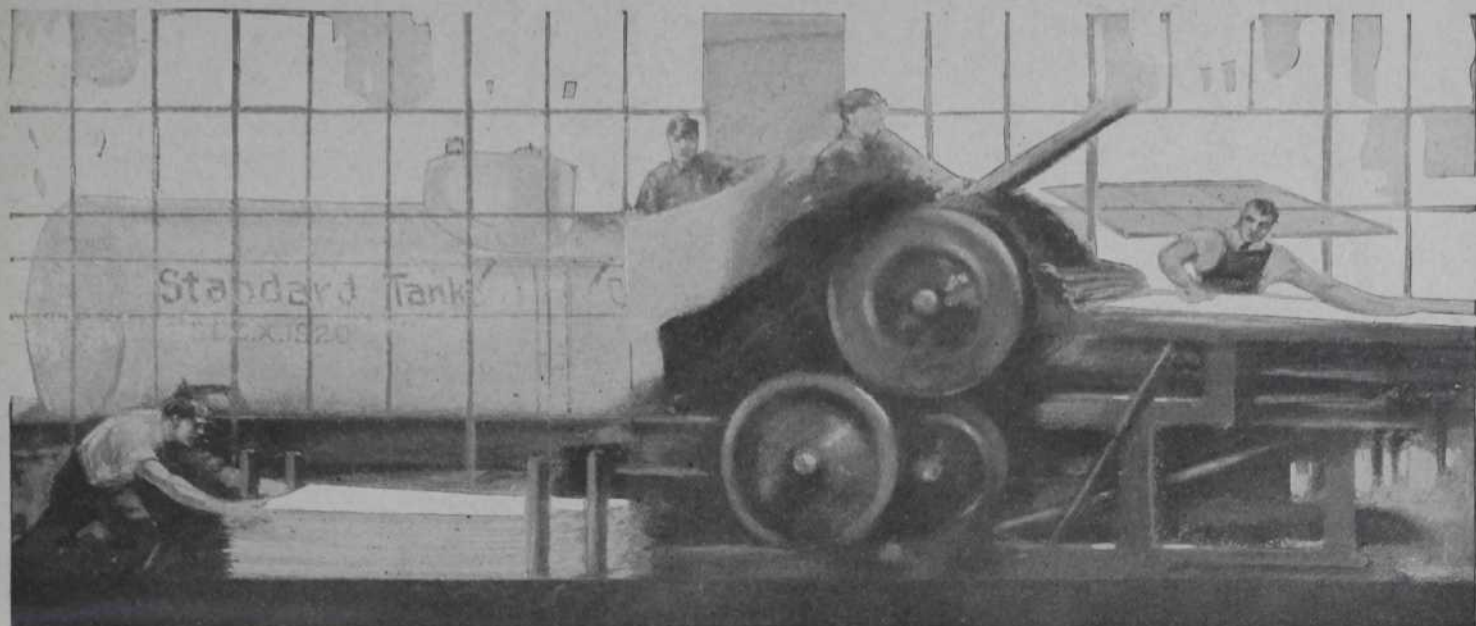
An Invitation from Berlin

THE Chamber of Commerce of the United States has recently received a copy of *Transatlantic Trade*, Volume 1, No. 1, for January, 1920, published by the American Association of Commerce and Trade at Berlin, Germany, "in the interests of the American manufacturer, exporter, and importer." The publication contains thirty pages of special articles, editorials, news items, and advertisements, and is attractively printed and interesting in contents.

Before the war the American Association of Commerce and Trade at Berlin, which has fine offices in the Equitable Building, at Nos. 59 and 60 Friedrichstrasse, was an organization member of the Chamber of Commerce of the United States. In some manner, which the new official organ does not make clear, the association kept in existence throughout the war. Since the armistice, and especially since American business men have been allowed to go into Germany for business purposes, the association has been active and has invited American business men in Berlin to make it their headquarters.

The constitution of the association had one provision limiting membership so that two-thirds of the active members should be Ameri-

can, but there was another provision that in case the American membership fell below the two-thirds, then all actions taken by the association should, nevertheless, be valid. The acting president is making a campaign for additional members. At present we have no consulate or embassy in Germany, and there is testimony from American business men that the American Association of Commerce and Trade is serving a useful purpose. It is soliciting memberships, at a yearly fee of \$25, and there seems little doubt that the association is worth supporting, provided that the new members have assurance that, in reorganizing, the constitution will be revised and that henceforth active membership and control and the guidance of all policies will be kept in the hands of Americans. We want a thoroughly American Chamber of Commerce to look out for the best interests of American trade in Germany. The association has had a long career of useful service, worked up files, lists, and contacts that were valuable, and it is desirable that the benefits of its work and equipment should be obtained by America in whatever organization is to be shaped and run by live American business men to do this sort of work in the future.



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The Freedom of the Seeds

Wouldn't you be interested to know how much was accomplished by the children you saw raising vegetables last year? Read then the astonishing feats of the grand army of the gardens

By H. R. RANDOLPH

Of the School Garden Commission, U. S. Bureau of Education

WHEN announcement was made at the close of the garden season in 1919 that the 2,500,000 children enlisted in the garden ranks in the United States, Hawaii, Philippine Islands, Porto Rico and Guam, under the direction of 50,000 garden teachers, had produced food-stuffs of an approximate value of \$48,000,000, the business men of the nation were gratified but not surprised.

Business men, many of them with vivid memories of their own youthful achievements and ambitions, had promptly cooperated with the children engaged in producing food at the point of consumption, unhindered by transportation problems or labor troubles, for Boards of Trade, Rotary Clubs, banks, and Chambers of Commerce had swiftly envisaged what could be accomplished by turning the energies of children into health-giving lines of productivity. Laziness is an "adult vice," as most people who know children will agree. Certainly the records of the youthful gardeners bear out this dictum.

Every child signed an enlistment pledge saying: "I agree to use my best efforts to increase the food production of my country by cultivating one or more food crops under the direction of the garden supervisor or teacher chosen for this work and to make such garden reports as may be required."

No wonder that the Youngstown Chamber of Commerce, which cooperated under school officials in promoting school-directed home gardening, reported at the close of the season that \$136,920 worth of food-stuffs had been produced in the Ohio city. Officials merely said, "I told you so."

The War Went Right On

AND when the Seattle Chamber of Commerce—which began its cooperation with the schools by having a motion-picture film made of the start of the garden work in "the Gateway to Alaska"—added up the net results of the garden work, they found that it had not stopped with the close of growing seasons, but that, throughout the winter, the children had devoted their energies to the destruction of insect pests.

With every other means of combating this pest producing unsatisfactory results and the number of caterpillars increasing every season, the job of exterminating them was turned over last fall to the boys and girls of the United States School Garden Army who had done so well in the matter of food-raising.

Owing to the work of the boys and girls in thirty-seven Seattle schools, 340,067 tent caterpillar egg-bands, containing 80,016,750 eggs, will not hatch. Had they hatched, the caterpillars, placed in single file when full grown, would have extended for a distance of 1,500 miles.

Civic associations in Owensboro, Ky., cooperated in giving financial assistance to school authorities in providing garden supervisors and in offering prizes for garden products raised by the children in school-supervised gardens. As a result of this effort,

from an original expenditure of less than \$900, food-stuffs to the value of \$33,700 were raised, as the 1,324 children enlisted in the garden army cultivated 300 acres of land, the children's gardens producing vegetables of an average value of \$20, with one garden worth \$125.

The attitude of the American business man toward school gardening is, perhaps, clearly expressed by the *Boston Post*, which points out that the land as the natural heritage of all the people requires the most far-reaching knowledge possible of what it can do, and thus imposes a paramount obligation on "the nation's business"—an obligation which it must accept since there can be no real poverty and distress in a community of efficient farmers. Referring to the United States School Garden Army, this paper says: "There is none of the curse of 'child labor' in this. The youngsters went on the job joyfully and willingly. The 'good fun' netted millions, and gave to the youthful workers invigoration, clear brains and the ability to do things. They had the blessed opportunity of living in the open and of daily seeing the results of their efforts in the growing crops. They had the supreme satisfaction of creating something, one of the greatest known incentives to spur on to increased endeavors."

This satisfaction of "creating something" doubtless played its part in the careers of Walker D. Hines and Charles Lathrop Pack, since one recalls that Mr. Hines was already solving transportation problems at the mature age of seven, when he earned his first dollar through the sale of tomatoes, personally delivering his products to his patrons in the little Kentucky town in which he lived. And Charles Lathrop Pack, at the age of fourteen, spent his entire fortune in the purchase of the expensive seeds of the firm-fleshed tomato, which had just then been originated. At the close of his summer's work, he had nearly \$400 to his credit, as the result of having marketed the seeds he secured through raising the firm-fleshed tomato.

What Did Each Produce?

UNLIKE most school subjects, which must be estimated in terms of deferred payments, school-supervised gardening is one subject the money value of which may be computed at the end of each garden season. Chambers of Commerce readily grasped the fact that the economic return of school-supervised gardening is in direct ratio to the efficiency of the plan of organization and the practical training of the teacher. Within certain limits soil and climate are not as important factors as trained teachers. The net average money return per child in the various cities and towns ranges from a few dollars to \$50, and a few individual returns reached as high as \$300. A phenomenal record was made by Sherman Wagner, a 14-year-old gardener of Minneapolis, who received returns from his one-third of a lot at the rate of \$3,761 per acre. This lad was "Crowned King of School Gardeners," according to the *Minneapolis Tribune*, which reports

that he garnered practically all the prizes awarded in 1918 and 1919 by the garden committees of the Minnesota city, receiving a bicycle, a watch, and \$80 in cash.

Yet the Minneapolis child displayed no more energy or pluck than did the children of Corpus Christi, Texas, who showed the real "Texas spirit" of which the citizens of Sam Houston's pride are wont to talk. Four thousand gardens were planted and flourishing in Corpus Christi, when the devastation of storm and tidal wave swept over the town in September, 1919, destroying every evidence of vegetation, and resulting in the death of all save ten children in one school. Yet, by December 1, seven hundred gardens had been replanted with twenty-four crops in the ground at one time.

Judged by a monetary standard, the achievements of children in Montezuma, Colo., may not seem impressive. Yet if one agrees that we are "raising citizens in school gardens," the fact that the children in the little mining town, 10,200 feet above sea-level, where faith and courage must walk hand in hand if vegetables are to be raised, earned the right to a garden flag is of importance. As a result of pluck and "stick-to-it-iveness," the children triumphed over nature's obstacles and the garden flag now waves over "the Great Divide."

Learning While They Work

THE gardening of the children provides them with an insight into economic problems. Even a 10-year-old child is able to grasp the reasons why the terms "money" and "wealth" must not be used synonymously. They learn that wealth consists of the good and therefore useful things in the possession of the nation and that money is only the written or coined sign of the relative quantities of wealth in each person's possession. They learn that, as Ruskin says, "every ounce of food produced increases, by its value, the value of all the money in the world and every ounce of food destroyed diminishes the value of all the money in the world." They learn that to cultivate land around Boston makes living easier in Seattle, and every acre of waste reclaimed at New Orleans eases the strain in Minneapolis.

To put these facts in terms that may be grasped by the children, who, if they are to solve post-war problems, must learn the meaning of currency inflation, the garden supervisors say: "Suppose ten children were landed on a desert island, and had \$15 in their possession. Their money is worthless because nothing is to be had for it. But suppose these ten children raise 20 bushels of corn and 40 bushels of potatoes. Their \$15 are then worth 20 bushels of corn and 40 bushels of potatoes, nothing more. If they make their \$15 into \$30 by writing new notes, the \$30 are still worth 20 bushels of corn, and 40 bushels of potatoes, nothing more, because nothing more is to be had for it. And the law of relative value is the same for all the world and all the people in it as for the children on the island."

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REPUBLIC TRUCKS



That the experiences of our young producers and merchants—for the children of the United States School Garden Army maintain markets to dispose of surplus vegetables—give them a true insight into business problems is demonstrated by letters written by children in garden essay contests. For instance, the Augusta, Ga., *Chronicle* recently conducted a contest, awarding prizes for the best letters written by children, advancing reasons as to why "The School Garden Army Should 'Carry On' in 1920." Many of the letters showed remarkable grasp.

To illustrate the range of the movement, the children of New York City produced food-stuffs of an estimated value of \$715,717.20, as 60,654 children cultivated home gardens of an average value of \$11.80. In Chicago the 90,000 children enlisted in the garden army produced \$450,000 in food-stuffs. A total of 175 acres was cultivated in Cleveland, Ohio, of an estimated value of \$79,835. The Chamber of Commerce, Colorado Springs, Colo., displayed garden products of the children of the city, and trips to the State Fair at Pueblo were given as awards for the best garden record and the best garden story. The Chamber of Commerce, of Wichita, Kansas, employed a garden supervisor to work under school direction, and the "first fruits" of this project was a garden market, held in the forum in July. Uniting with the City Commission and the Board of Education, the Chamber of Commerce, of Cadillac, Mich., gave the garden regular campaign support. In Duluth, Minn., the Board of Trade offered \$10.00 prizes to each school for the best

garden cultivated by the pupils. The Pittsburgh Chamber of Commerce, Pittsburgh, encouraged the work of the gardening department of the schools by awarding \$200 in prizes. The Civics Department of the Chamber of Commerce, Sumter, S. C., enlisted the aid of practically every merchant in the city, each of whom gave prizes from his stock. It is estimated that the garden products raised in Knoxville, Tenn., were of a value of \$16,263.12.

In many cotton mill towns the success of garden work resulted in such a large quantity of canned produce that managers of the company stores found it unnecessary to order any canned goods.

Getting Water Two Miles Away!

PRODUCTS of the gardens of the children in Butte, Mont., were sent on to the State Fair at Helena, and although the season of 1919 was less favorable for gardening than any in recent years, because of the drouth, the superintendent of schools reports that, due to increased efforts on the part of the children, the quality and quantity of the produce were fully up to the standard. In Butte, some of the plucky youngsters carried water in cans 2 miles for garden irrigation.

In organizing the United States School Garden Army, the Bureau of Education has had in mind the primal necessity of providing gardening instruction throughout the summer vacation. The organization exists primarily as an organization of children doing garden work under school supervision. The bureau publishes manuals of garden lessons, written by agricultural college graduates who have also had many years pedagogical experi-

ence. The manuals are prepared for the five climatic regions of the United States, and the lessons are so practical that they may be used outside the classroom, in directing actual garden work. Manuals are supplied free to teachers, and copies for pupils may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C. The Bureau of Education also supplies the garden army insignia to every child, and posters and garden record blanks are provided for the use of teachers.

A certificate, signed by the Secretary of the Interior, the Commissioner of Education, the director of the United States School Garden Army, with a space left for the signature of a local official, has been engraved. This certificate will be presented at the end of the garden season to children who have achieved a real success. Standards for awarding the certificate are left largely to the local supervisors or teachers. These standards should be high, it is announced, but such as can be reached by all children who make an honest effort.

Children are enrolled in companies of from 10 to 150, and each company is intended to have a captain and one or two lieutenants.

In the selection of officers, American traditions are upheld as they are elected from the ranks. Experience has demonstrated that the company officers are "hard-boiled" enough to make the members of their companies overcome that feeling for another nap after mother calls up the stairs in the morning.

Great as are the results already achieved, they are not comparable to what may be accomplished if the work is continued until gardening has a place in every school's curriculum.



You'd never in the world guess where this picture was taken. It is on Boston Common! These small Bostonians are among the 2,500,000 youngsters who produced \$48,000,000

worth of food-stuffs last year. We can't say for sure, but it looks as if the man with his back to the audience is demonstrating the peculiarities of Boston's most famous vegetable.



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Our Defenseless Patents

The lot of the inventor is proverbially a hard one, and it is not improved by the inscrutable ways of our present patent system, which is fascinating in its complexity

By AARON HARDY ULM

LITTLE Johnnie Jenkins, typical American youngster, likes to tinker with tools. With hammer and saw he creates crude but original things.

"I believe the kid is going to be an inventor," muses Father Jenkins. Whereupon the eyes of Mother Jenkins brighten with maternal hope. She realizes what invention, via the sewing machine, electric light, vacuum cleaner and dozens of others, has done for the housewife. She has a notion, too, that successful inventing is profitable.

When summer comes, Mrs. Jenkins takes Johnnie and the other little Jenkinses on vacation Washingtonward.

Arriving there they visit the building which houses the Patent Office—rated by some as the most architecturally perfect in Washington. They are greeted by a sign which says: "Closed to Visitors."

But they ignore it and pass through a doorway that lies beyond the mass of Parthenon-like pillars at the entrance. A guard stops them.

"My little son here is—er—expects to be an inventor," explains Mrs. Jenkins, "and he wants to see the many wonderful things we are told are here."

"Nothing you can see here, ma'am," says the guard with kindness.

"Can't he see the models that are on display?"

"They are no longer on display, ma'am; they are boxed up in the cellar."

"Can't he go around and look at other things and talk to some of the experts?"

"He wouldn't see anything but offices and files. Everybody here is too busy to talk to him. Now if he wants to find out something he might go up into the search room and look over the records." (There are a million and a half of them.)

"But if he wants to patent something," the guard advises, sympathetically, "I'd suggest that you go down the street and see a lawyer. I don't see how he can get any help here."

And Mrs. Jenkins with her brood turns toward the street, and little Johnnie, who might be an Edison or a Westinghouse in the making, breaks into tears.

Nothing to See

FREQUENTLY have I seen it happen," declared an attache of the office to the writer, "that is, boys who came here to see and learn things go away weeping when they found out they could see and learn nothing. And every time it occurred I wanted to cry, too."

Let it be stated promptly that none of the faults herein to be complained of are due to the personnel of the Patent Office. The thousand or more persons employed there realize more fully than any others the shortcomings of the establishment they operate, and one leading in a movement looking to improvement.

Now consider William Jones, who has starved himself and his family in order to add to the comfort and mental welfare of masculinity by inventing an unlosable collar

button. Success crowns his efforts just as the sheriff arrives for purposes—let us put it—of incarceration.

"Wait until I get a reply to this letter I am sending to Washington," begs Jones, with simple faith. The sheriff waits.

In a few days—the reply. It informs him that the Patent Office can't tell him whether his collar-button idea is new or, if new, whether it is worth a copper cent. It only explains to him the routine rules of applying for a patent. He quickly learns he must see a lawyer. Seemingly there is some good reason for this, but, incidentally, the Patent Office is about the only governmental bureau with which one is compelled to deal through an expert representative. For every employee of the office there are about five patent attorneys whose practice relates directly or indirectly to the work of the office.

The Willing Attorneys

WELL, Jones learns that an attorney, for a small fee, will make a "preliminary" examination of the Patent Office records to see whether his invention is likely to prove patentable. The lawyer, being human and further fees depending on his report, is hardly likely to construe doubts against the issuance of a patent. He advises the filing of an application. With it goes a fee of \$15. To provide that, together with the lawyer's personal charge, Jones may sell his wife's wash tubs and hopefully await results.

Several months later, perhaps, he is informed that the patent may be secured on the payment of another fee; this time it is \$20.

"Fine!" exclaims Jones when the beribboned paper bearing the Government's impress arrives and informs him that, in exchange for making his discovery public, he may have the exclusive enjoyment of it for seventeen years.

But unless there happens to be no demand for the invention or Jones' case proves an exception to the general rule, the inventor will then find that his fight for patent rights has only begun. His patent proves to be only an admission ticket to the courts.

Once in the courts, he may expect to stay there anywhere from two to fifteen years, depending on his own and his contestants' staying qualities. For the United States Courts of Appeal now have final jurisdiction in all patent cases which they do not certify to the Supreme Court. And there are nine of those appellate courts. One may decide with Jones and the others may decide against him. Thus he may have a patent in one section of the country and not have a patent in other sections; indeed, as has happened, he may be a patentee on one side of the street in certain towns and a trespasser upon the rights of others if he sells his invention on the opposite side of the street. This has actually been the case; notably twice in the life of Tesla, the great electrical inventor. Theoretically we have an all but perfect patent system. Practically it is exceedingly imperfect because the machinery by which it functions has not kept up with the demands made upon it.

The subject is of especial importance today, because the American inventor is out of the trenches with a vim. Ink had not dried on the armistice when peace-time inventions began to sizzle. Last year was a record year in volume if not quality of inventions. Applicants for patents reaching the Patent Office during 1919 approached the unprecedented number of 70,000, more than any year's output. The increase grew with the year. Those for the third quarter exceeded by 51 per cent receipts of the same quarter in 1918.

Invention, of course, did not suspend during the war, but, at least in volume of production, it diminished. And a great proportion of that which did function related to war objects. But at noon on November 11, 1918, the Great War became as ancient to the inventor as the Peloponnesian conflicts of long ago.

Now inventions in general run from five to ten years ahead of the times. Therefore, to define the importance of our present released inventive energy would require the prescience of a prophet. All that can be done here is to trace a skeleton outline of the facts.

In October, 1919, there reached the division of the Patent Office handling metallurgical inventions a total of 662 applications for patents. In one division handling chemical subjects—there are several chemical divisions—480 applications were filed; in the agricultural implement division 354 applications arrived; and the division dealing with vehicle wheels and such appurtenances received 729 applications, about one-half of which related to resilient tires. This last item discloses the fact that inventions for the automobile industry best reflect the current work of the Patent Office.

In October, for instance, 441 applications went to the division that handles automobile engines and parts. That considering frame work and gearing received 550.

Never Can Tell About a Patent

THERE may be several epoch-making discoveries among the inventions now in process of being patented," says an old Patent Office official: "if so, time only will prove them such. Never have I known the success of a great invention to be perceived as it passed through this office. We thought the phonograph would be a dictating machine only; none of us dreamed it would become a great medium of entertainment. Neither can one foretell the measure of success that will meet most of the inventions that are merely additions to or improvements on old ones. The flat phonograph record is a good illustration. The story of its invention lay here for years before anyone realized its full worth. In fact the inventor failed to keep his patent alive in other countries and lost his rights outside of the United States, rights that earned him millions during the last few years of the patent's American life."

Hence the legal requirement that an invention must be "useful" to be entitled to patent

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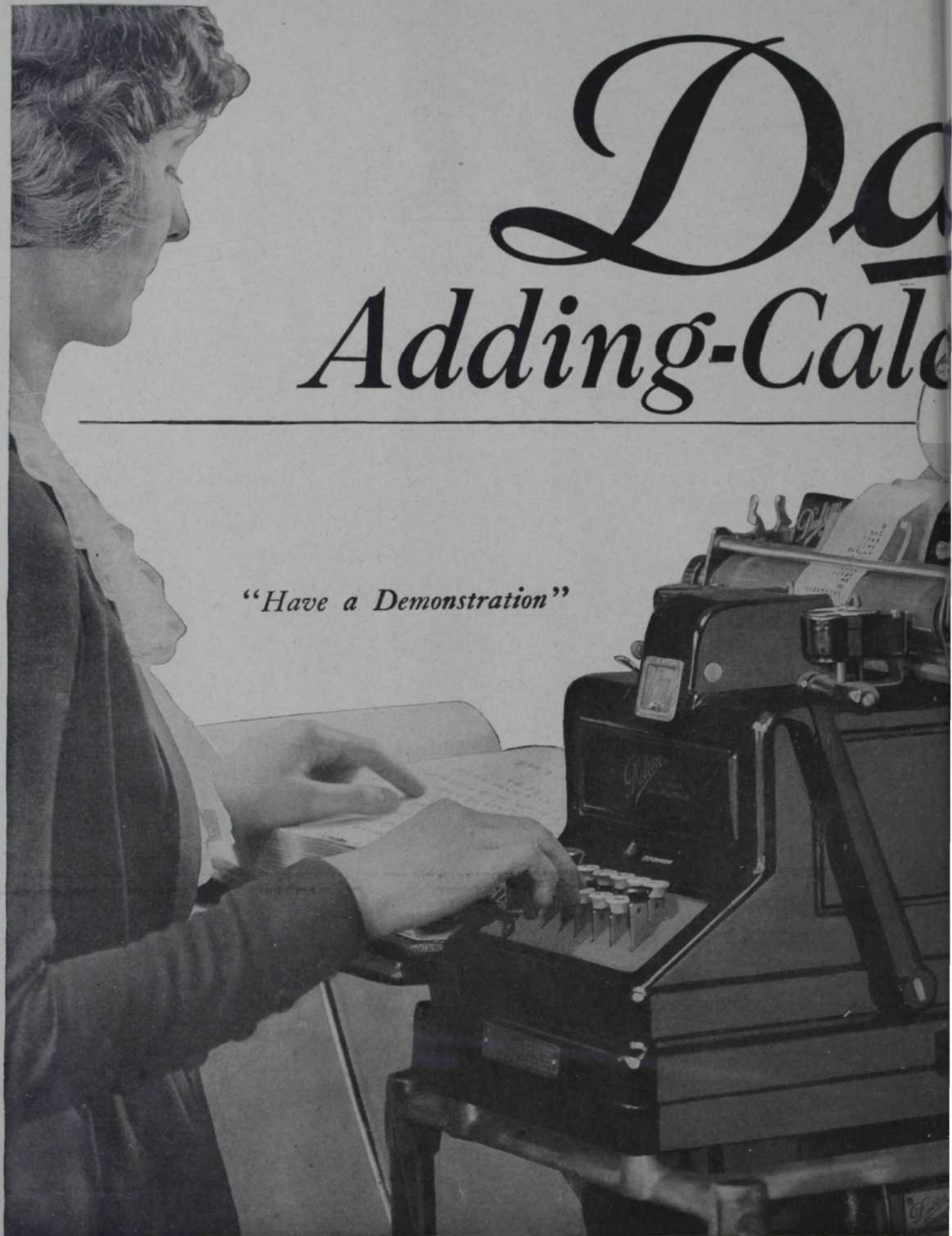
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Using the touch method, the operator of a Dalton is enabled to add and calcu-

late with 6,000 to 20,000 fewer movements of the eyes, head, and hands, daily. 25 to 80 per cent more work can be turned out than is possible with ordinary machines.

Heretofore, also, the business man has had to buy one machine for adding, and another for calculating. Adding and calculating are combined in the Dalton—two functions, one machine, one cost.

It covers the whole field of figure work in business. It adds, subtracts, multiplies and divides; figures fractions and percentages; computes interest and discounts, cross-foots, tabulates, takes trial balances, makes out statements, and verifies invoices, making every multiplication and addition, figuring the discounts, printing the net total, and rendering a complete physical audit.

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Agents for Canada, The United Typewriter Company, Toronto and Branches

can be met only nominally by the Patent Office examiners.

"I remember a metal heating process that came through here once," one of them says. "We doubted if it were sufficiently original or useful to be entitled to patent. But the patent was issued, and the inventor sold his rights for a few thousand dollars. A few years later I learned that the patent was earning about a million dollars a year in royalties."

Of course most inventions are additions to other inventions. In Germany a distinction is drawn between them and original or basic discoveries. In this country they are all classed alike.

One Concern's Record

ONE typewriter concern takes out from two to three hundred patents relating to the typewriter every year. Several hundred additional ones are taken out by other concerns. The applications relating directly to automobiles run into the thousands annually.

The patent department is becoming a fixture in big industrial concerns. Some had them as far back as twenty years ago, but during and since the war the idea has spread marvelously. Those departments, while working hand in hand with research laboratories, deal only with patents. It is not unlikely that from one-third to one-half of the patent business of the Government comes from such highly specialized branches of big industry.

These departments draw in large part from the personnel of the United States Patent Office for expert help. Because of the low salaries paid by the Government they have no trouble in securing recruits. Such developments are slowing up and reducing the efficiency of our patent system.

Thomas Jefferson, as Secretary of State, was in reality our first patent commissioner. He was among the first United States citizens to take out a patent on an invention. During the early years of the country, the Patent Office was an inconspicuous section of the State Department. Until 1836 the "recording" system, then general throughout the world, was employed. Under it anybody could register any pretended invention, which meant that patenting really was done by the courts.

Then came the examination system now in vogue. Under it each application for patent is submitted to close scrutiny and is compared with all other issued patents of like kind. Thus when a patent is issued under the imprimatur of the Government, the presumption is that it represents a genuine invention properly protected.

In fact the courts hold that a patent is a contract, instead of a privilege or concession. To get one an inventor must comply with hard and fast rules laid down by statute. If, for example, he fails to make application within two years after the invention is published or put in use, he is presumed to have abandoned his rights. While the inventor is held to strict accountability, the Government assumes virtually no responsibility for

protecting its part of the contract which a patent duly issued constructively represents.

It is proposed to ameliorate the litigation evil by having one patent court, patterned after the United States Court of Claims, with final jurisdiction in all patent cases. The proposal has been approved by judges, lawyers, manufacturers, inventors, and all.

But more needs to be done. The volume of litigation over patents must be reduced by making it unprofitable. This can be accomplished only by

increased in whatever amount necessary to insure the highest possible efficiency in the administration of patents.

The equipment of the Patent Office is perhaps a quarter of a century behind the times and reflects little of the advance first recorded there. It hasn't even a chemical laboratory for testing the thousands of patent applications growing out of that now most rapidly growing field of research. They are tested on paper. Even many now common office appliances, they say, are not yet available to them.

In this era of technical and scientific literature, the Patent Office is allowed only \$3,000 a year with which to keep its library supplied with the literature of industrial and scientific development.

Examiners are presumed to keep informed, through personal visits to great industrial plants, of the applied advances in the "arts" they deal with. The fund allowed for such purposes amounts to \$1.25 annually for each member of the examining personnel.

When the basis of the present organization of the Patent Office was formed in the late eighteen forties, a chief patent examiner was rated in importance with a member of Congress and a United States Court judge. Their salaries were made practically the same. Now a principal examiner gets \$2,700 a year, a congressman \$7,500 and judges \$7,000 up. And it takes an examiner from ten to twenty years to rise to the highest grade.

Entrants to the examining corps are presumed to have education tantamount to a course through a first-class technological college. They are paid \$1,500 a year. During the past two years, the Civil Service Commission has found it impossible to get sufficient men to stand the examination for vacancies. They have been able to fill vacancies, in the main, by appointing high school boys temporarily without examination and then making big allowances for "experience."

Frequently as long as nine months must pass before a patent application can be looked at by an examiner.

The turnover in the examining corps has been tremendous, amounting during the last year to over 20 per cent. On leaving the government service for outside employment employees increased their salaries about 30 per cent. In a few years they often double or more than double what they had received from the Government.

The technical force of the office numbers about 400. There is a clerical force of 500 and only 24 such positions pay, barring war bonuses, more than \$1,200. The basic salaries allowed most of them range from \$750 to \$900. The lowest is for typists. Are they able to get typists at the price? No; they make them. Girls are taken on and allowed to develop typing capacity later.

All of which means that inventors are being specially taxed for more than they get. They pay for secure patents, but the patents issued are becoming less and less secure against court attack, since they cannot be



What are we doing to encourage and protect the genius for invention that shows itself in our boys?

bringing the Patent Office up to a state of efficiency whereby its findings will be so nearly faultless that it will be futile to subject them to court review. That is generally agreed.

The reforms urged involve no levies on the purses of taxpayers. Most readers may be surprised to hear it, but the humble taxpayer has never contributed a cent toward the promotion of invention via the Patent Office. During the past five years the Patent Office has taken in, in the form of fees charged inventors, more than a million dollars above the expense attaching to the granting of patents. It has "cleared" in the last seventy-five years about \$9,000,000. On every patent issued there is an average profit of about \$6.

By every rule of fairness the money collected in fees should be spent on the security of patents. In fact, representative inventors are heartily in favor of the fees being in-



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issued with the care that even reasonable security requires.

The question of individual welfare or rights is of negligible importance; and herein lies a big misconception.

Patents are not granted primarily for the benefit of inventors, any more than the Patent Office is maintained for the benefit of persons employed there. The patent system, as the Constitution says, was installed to promote the interests of the public.

"The American patent system has been one of the potent factors in the development of the prosperity of the country," says the Patent Committee of the National Research Council. It points out further that there is no natural reason why Americans, being the descendants of Europeans, should lead their kinsman abroad in inventing. In fact, since several European countries adopted—and in one case, say some, greatly improved on—our patent system we haven't maintained our one-time phenomenal lead in invention.

Patents and Victory

"YOU will find," said a patent expert to the writer, "that national efficiency in the recent war ran parallel with the proportion of patents to population granted by each country involved."

"It might be said," declared another, "that a secure patent and not necessity is the true mother of invention. I can't recall a single modern invention that, unpatented, got anywhere. Doctors are beginning to patent their discoveries, as the Government itself is now doing."

"Inventions have to overcome habit, custom, prejudice and indifference. They must be exploited. Who would have exploited the adding machine or cash register, if there had been no protection against others coming along and supplying the market as rapidly as it was developed?"

It is significant that basic inventions generally come from novices without training in the lines involved and from young and unknown persons. Hence the progress of invention in future can't be safely left wholly to the great industrial laboratories which, regardless of the defects in our patent system, can usually take care of themselves.

For the past record would indicate that nine times out of ten the discoveries that revolutionize custom will come from men who, like Bell, was an inconspicuous teacher, or the Wright brothers, who were obscure mechanics, i. e., the little Johnnie Jenkin's inspired by creative instinct and assured of reward in case of success.

The patent system, as it operates, provides no affirmative aid and little if any affirmative encouragement to the little Johnnie Jenkin's of the country. And, worse still, if they go ahead and sacrifice time and energy to the development of some public need, they have no assurance that the patent rights which may finally be conferred will prove at all to be rights.

"Unhappily," says Thomas A. Edison, "there is absolute certainty that under our present patent laws the poor devil of an inventor would never receive any reward for it." Congress is now considering meas-

ures for the relief of the United States Patent Office. One, increasing the working force, has been adopted. Another, giving more general relief, has passed the House of Representatives and is now pending in the Senate.

Valuation "by Assumption"

RATIONALITY is not an ideal which the Interstate Commerce Commission can exact of Congress, according to the Supreme Court. Under the statute for valuation of the railroads the commission is to ascertain, among other things, the present cost if a railroad had to obtain its right of way and other land through condemnation. This the commission decided it would not do, saying it involved matters "beyond the possibility of rational determination" and "inadmissible assumptions."

The Kansas City Southern Railway, however, took another position about the matter, as was not unnatural, since "rationality" is a subject about which different people have different minds. So the question came to the Supreme Court, whether or not the commission could come to its own conclusions about the desirability of mental operations Congress had asked it to perform.

The court said that, regardless of the point of view of the commission, it would have to proceed with the duty Congress had given it, even if, in the commission's opinion, it were necessary to be irrational and make some violent assumptions.

Lives Instead of Monuments

The old idea was to leave mine accidents in the careless hands of Fate; now industry, government and science have joined to solve the disasters and prevent their repetition

By ALEXANDER T. VOGELSANG

Assistant Secretary of the Interior

WRECKS, fires, floods and explosions have reaped a toll year after year, while a saddened multitude has stood by to deplore the hand of fate which has allowed human life and the fruit of industry to be swept into oblivion. Monuments of art have been erected to victims of disasters, and all the curatives known to philanthropy have been applied generously. But it was not until within the last decade, when we were confronted with the actual figures of the toll of disaster, that we became sufficiently shocked to devise a means whereby a great percentage of this annual levy of death and ruin could be spared.

In ten years thirty thousand miners have been killed and seventy thousand injured, many of them maimed for life, in the United States. Mining, and more especially coal mining, has always been a hazardous industry, but our record for this sort of inefficiency has exceeded that of any other country.

A direct step in the promotion of greater safety and health in the mining industry was made in 1910 by the creation of the Bureau of Mines. The Government first awakened the industry to its needs of improvement through an educational campaign, followed up with instructions on the causes of explosions, fires and accidents in the mining industry, and the study of their prevention.

The investigational work of the bureau covers a wide range of activities. At Bruce-ton, Pa., an experimental coal mine is operated where the causes of mine explosions and the means of their prevention are investigated. Much valuable information has thus been gained.

An illustration of this is the use of rock-dust barriers, developed under the direction of the chief mining engineer, and which are coming into wide use. The rock dust is so distributed in the mine that the force of the explosion blows it into the air, making a non-inflammable mixture which acts as a barrier to prevent the flame of the explosion passing beyond that point, and thus limits and confines the explosion. Here also is carried on the work of the bureau in explosives, formerly a great source of injury to the individual miner. It has been found that certain explosives may be safely used in gaseous and dusty mines and others may not, and standards have been promulgated for the manufacture of permissible explosives. The work of the bureau has been so successful that it is almost as well known in Europe as in this country.

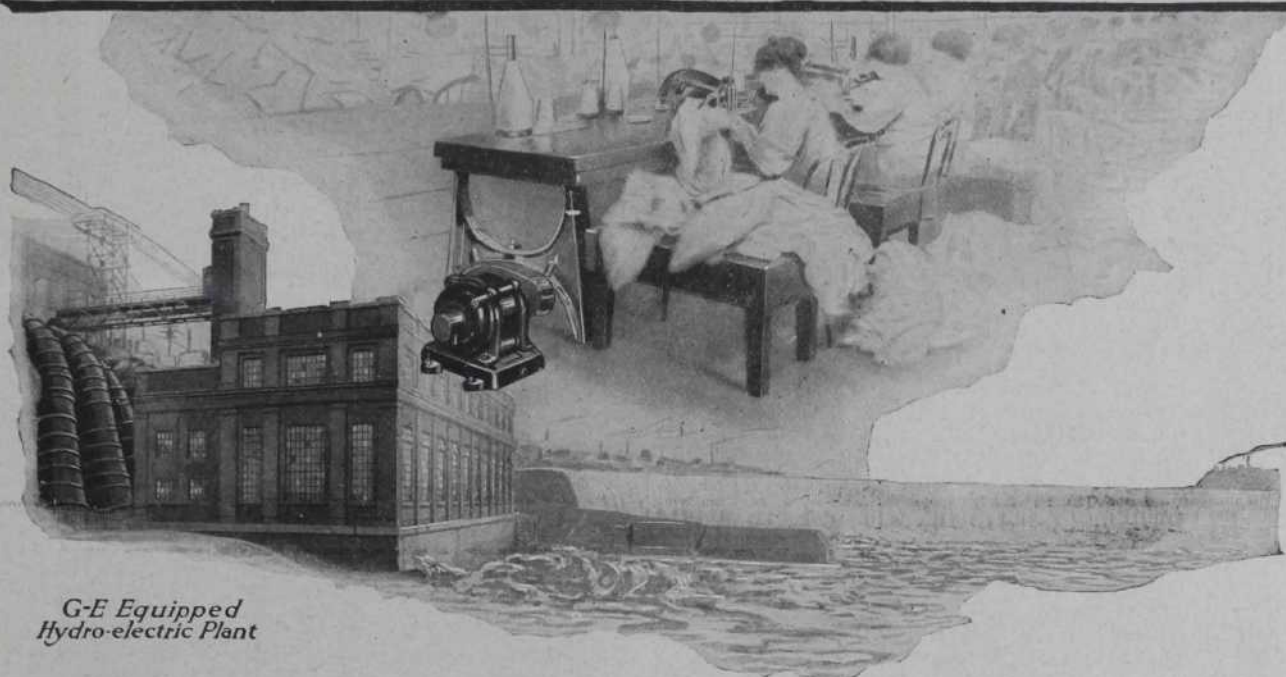
Within the last few years many discoveries and inventions made during the war have been adopted by the Bureau of Mines. Hundreds of casualties have resulted from want

of instruments which would enable rescuers to tell the exact location of entombed miners and to penetrate safely through gas fumes and smoke and reach them when they were located. The geophone, used by sappers in their dangerous underground combats to locate the exact position of the enemy, does not only detect subterranean noises beyond the reach of human ear, but it tells the exact direction from which the sound is coming. Tests made in the vicinity of Pittsburgh show that a miner pounding on a coal rib with a pick, piece of timber or a sledge hammer, can be heard twelve hundred feet away.

One of the great problems of the coal miner is that of underground illumination. The open oil flame, which has been so widely used in past years, has contributed to innumerable gas or coal-dust fires. Recently great improvements have been made in the safety lamp and in electric lamps, which have been authorized by the bureau for use in gaseous and dusty mines.

One of the notable investigations conducted by the bureau has led to the development of improved breathing apparatus for mine-rescue operations to replace types of foreign make now in use. A self-contained breathing apparatus, carried wholly on the back of the miner, has been developed by the Bureau of

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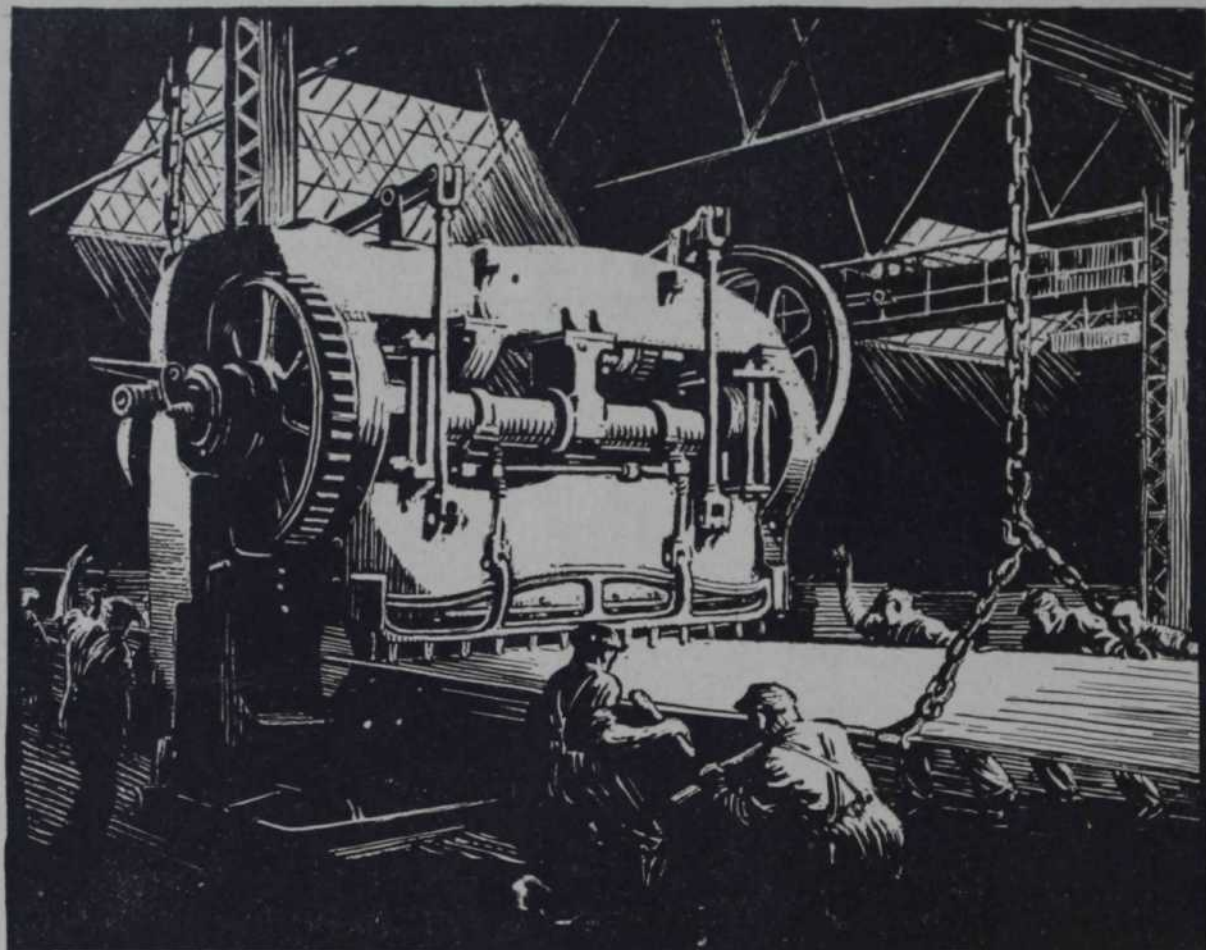


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Mines and is now manufactured commercially.

Tests conducted with this device mark it as a distinct advance in simplicity, reliability, capacity and lightness over other available apparatus for rescue work. The perfection of this apparatus will soon relieve the United States of its former dependence on foreign manufacturers of breathing equipment, with the further advantage of providing a much better apparatus than any available when the investigation began.

From a small beginning the Bureau of Mines has grown in a single decade to an organization of eleven experiment stations distributed among the great mining centers, each station supplying its mining territory with adequate protection and first-aid instruction. From each experiment station is operated a mine-rescue car, equipped to instruct and to administer first aid. Eight rescue stations have been installed in different parts of the country, and agree at deal of constructive work is done at the experimental mine in the Pittsburgh district at Bruceton.

At present the Bureau of Mines fills three offices. It renders immediate aid in mine explosions or other disasters; it trains mine operators and employees in the methods of prevention of disasters and the proper administration of first aid when they occur; it also devises safe equipment for the working of mines and ascertains causes of accidents, bringing into use better methods of prevention and disseminating this knowledge to the industry.

The expedient of equipping railway cars with the necessary apparatus and sending them through the principal mining districts, so that they would never be far from the scene of a possible disaster, and could carry on, meanwhile, their educational work to the best advantage, has been the most successful undertaking the bureau has yet accomplished. One end of the car is arranged for use as a demonstration room, and this is outfitted with twelve sets of the latest rescue apparatus—safety lamps, first-aid supplies, fire extinguishers, electric lamps, gas analysis apparatus and other supplies and repair parts needed for training and actual work of rescue and recovery in case of disaster. The remainder of the car serves for living quarters for the crew, which consists of six men—mining engineer, surgeon, stenographer, foreman miner, first-aid miner and cook.

Spreading the Gospel

THE cars travel from mine to mine according to a prearranged schedule, covering their respective districts within two or three months. Car headquarters are at Reno, Pittsburgh, Pa., Des Moines, Pittsburg, Kan., Butte, Huntington, W. Va., Terre Haute, Ironwood, Mich., and Rock Springs, Wyo.

Some of the more progressive mine operators, who have already come to a full realization of the value of mine-rescue and first-aid training and who appreciate the increased value of an employee who has such training,

have frequently named certain men from their ranks whom they wish to have instructed. These men have been permitted to report to the car during the day, and the company has made no deduction from their salaries while engaged in training.

At the fourth National First Aid and Mine Rescue Meet, held in Pittsburgh, October 1, 1919, eighty-eight teams from all over the United States entered the first-aid competition. It is a good evidence of how thoroughly the bureau's work has covered the country that the first prize was won by a team from Pennsylvania, second by a team from Montana, and the third by the State of Washington.

In addition to the cars there are eight mine safety stations, located at Pittsburgh, McAlister, Okla., Jellico, Tenn., Vincennes, Ind., Berkeley, Calif., Seattle, Norton, Va., and Evansville, Ind. These stations are equipped with mine-rescue trucks which permit apparatus and men to be taken immediately to any scene of disaster in their district.

Each year the United States is giving increasing attention to the efficient development of its mineral wealth and to the improvement of the working conditions of its citizens employed in the mining and metallurgical industries. By the combined efforts of operator, miner, state and federal employees, decided progress is being made toward the proper safeguarding of the worker and toward the utilization of the nation's resources.



Dangers surround the miner as soon as he enters the shaft. They are of many descriptions. Electricity, fire, water, gas, explosives, cave-ins—any of these may prove

his undoing. The government is making every effort to cut down the count which in ten years has amounted to 30,000 killed and 70,000 injured in the United States.

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What's in a Name?

A great deal—as witness the regulations recently laid down for the guidance of corporations that would avail themselves of the opportunities offered by the Edge Bill

A NAME has something in it after all, the casual remark of the poet to the contrary notwithstanding. The new federal corporations organized under the Edge Act of December 24, 1919, are not to adopt such names as they please, but are to obtain in advance the Federal Reserve Board's approval of the title they will use.

In fact, provisions about the title occupy a prominent place in the regulations announced on March 24 by the Reserve Board. Persons contemplating organization of a corporation under the new law are to begin by making preliminary application to the board for approval of the title they contemplate using. The title must not resemble the style of any other corporation to an extent that might result in misleading the public as to identity, purpose, connections, or affiliations. The word "bank" may not be included if there is a purpose to issue bonds or similar obligations of the corporation itself, and in no event may both "bank" and "federal" appear in the title.

Having obtained approval of a title, the organizers will enter into articles of association and then are to make an organization certificate, filing both documents with the Reserve Board. Before proceeding further they will wait until the board has issued a preliminary permit. This permit will authorize them to take such action as may be incidental and preliminary in the organization of the corporation. The other powers of the corporation may be exercised only after the board has issued a final permit to commence business, and the board will not issue this permit until the president, or cashier, and at least three directors have joined in certifying that each director elected is an American citizen, that a majority of the shares is held by citizens, federal corporations in which a controlling interest is owned by citizens, or other corporations and firms having a controlling interest owned by citizens, and that each stockholder has paid in cash for at least 25 per cent of his subscription, and the total cash paid in equals at least 25 per cent of the authorized capital stock.

It's Very Specific

AS the control is to remain American, issue and transfer of shares will be subject to approval by the board of directors of each corporation, and every application for issue or transfer is to be accompanied by an affidavit respecting citizenship of the registered and beneficial owners, and in the event of individual American citizens, whether they are "natural-born" or "naturalized." In the case of a naturalized citizen, the affidavit must show whether or not for any purpose there remains allegiance to any foreign state.

Any further evidence necessary for determination of the question of American control may be required by the board of directors, and the directors must refuse to issue or transfer any stock which would cause the control to pass out of American hands. Their decisions on the questions involved are to be final, and not subject to question on any ground whatsoever. If an American holder of shares changes his nationality, or his interest becomes, in the directors' opinion, subject to control abroad, and the result is



to impair the American control for which the law provides, the directors may serve notice that transfer to a proper owner must be made within two months, and if the notice is not followed within this time the shares will be forfeited to the corporation; while such a notice is outstanding, the shares in question may not be voted.

In one of the new corporations there may be more than one class of stock, but the obligations, rights and privileges of each must be clearly indicated. The par value of shares is to be specified, and there may be no shares without par value.

Operations in the United States will be confined to incidents of international and foreign business. Permits from the Reserve Board may be obtained for agencies in the United States to perform specific purposes, but not to carry on generally the corporation's business. Branches may not be established in the United States.

In acquiring stock in domestic companies, corporations organized under the Edge law must see to it that the companies in which they invest are not transacting business in the United States except incidentally to international or foreign business, that they are not engaged in the general business of buying or selling merchandise in the United States, and that the investing corporation is not in substantial competition with the company in which it acquires an interest. The restriction about competition does not apply, however, in the case of companies organized under foreign laws.

The difficulties about regulation of securities were obviously in the Reserve Board's mind when it wrote the part of the regulations dealing with the securities these federal corporations may issue. There must be approval in advance for each issue, but the board insists that in no case is this to be understood as "in any way to imply that the Federal Reserve Board has approved or passed upon the merits of such obligations as investments." While admitting it will determine the amount of obligations that may be issued, it proscribes reference in any circular to the board's action, wishing to avoid any possibility of the public's misconstruing its approval as relating to the merits or desirability of the obligations as an investment. Similar regulations are laid down for foreign securities which the new corporation may wish to offer for sale with their endorsement or guaranty.

Acceptances may be given if the accepting corporation acts within the regulations. In any event, the draft that is accepted must grow out of transactions such as form the basis for acceptances of national banks under

the Federal Reserve Act. If a draft has a maturity in excess of six months, there must be approval by the Reserve Board, and there must be similar approval if a corporation, which has outstanding any obligations of its own, wants to give its acceptance upon any draft.

In two respects the new kind of corporation will have advantages over national banks in limitations upon its acceptances. In the first place, the limitations for the new corporations are more liberal in referring to subscribed capital instead of paid-up capital, thus being related to the standard common in England rather than the standard of our own national banking laws. In the second place, although a national bank cannot in connection with foreign trade give acceptances aggregating more than 100 per cent of its capital and surplus, an "Edge-Law" corporation may go above this ratio on condition either that 50 per cent of the whole excess is fully secured or the whole excess over 200 per cent of capital and surplus is secured, the corporation being free to choose the alternative meaning the smaller amount of secured acceptances.

As reserves against acceptances maturing in more than thirty days a corporation is to have 3 per cent, the percentage a national bank holds against time deposits, the reserve to be in cash balances with other banks, bankers' acceptances, and securities approved by the Reserve Board. When the maturity becomes less than thirty days, the reserve is to rise to 15 per cent.

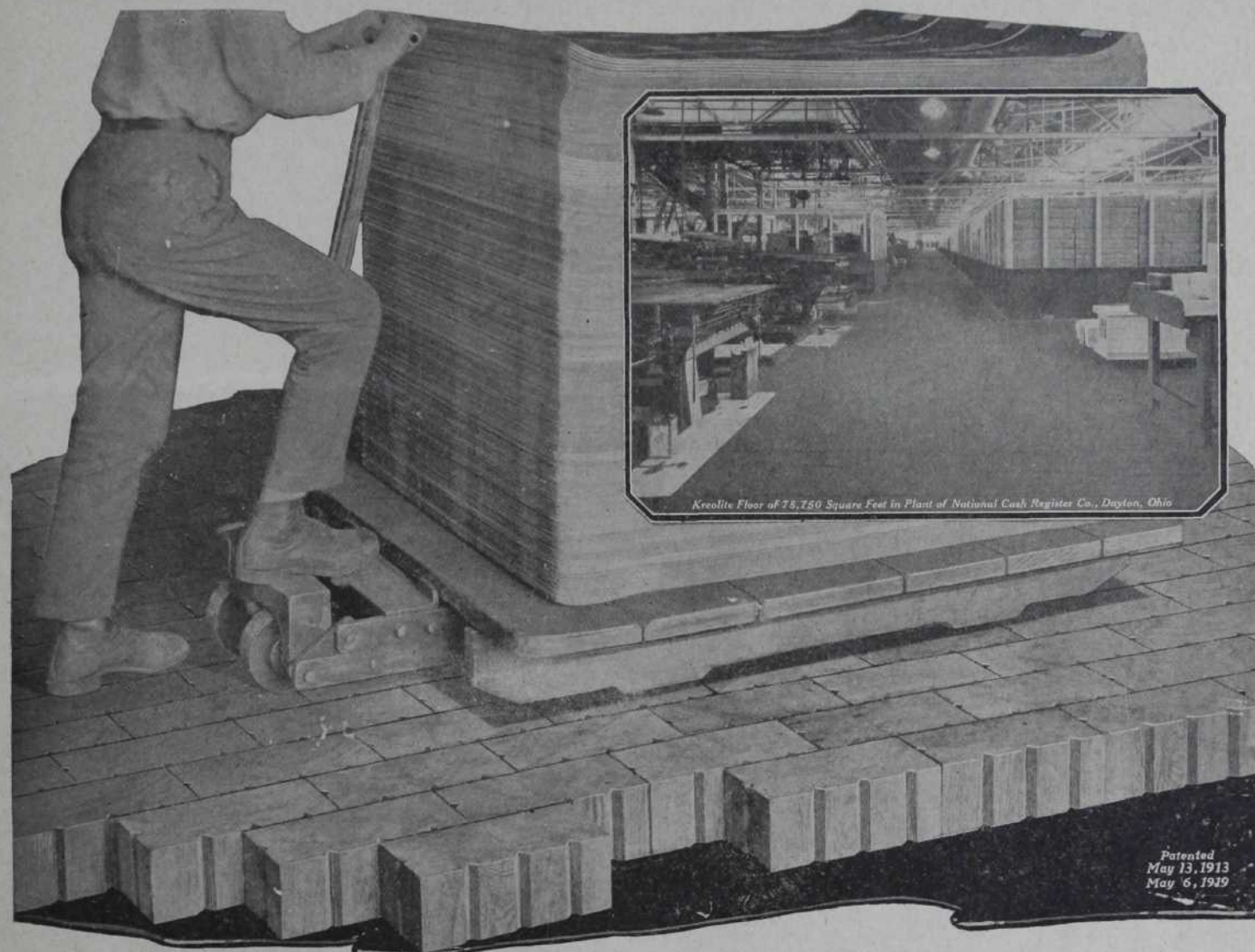
As to Receiving Deposits

POWERS to receive deposits came in for debate while the new law was under consideration. The regulations allow a corporation to receive in the United States only deposits incidental to or for the purpose of carrying out transactions in foreign countries where the corporation operates. Abroad it may receive any kind of deposits, unless it has outstanding obligations of its own; in that event it can receive in other countries only such deposits as it might receive in the United States. This restriction, together with other restrictions on corporations which have issued their own securities, is apparently intended to divide the new federal corporations into two classes, those engaged in foreign banking and those financing foreign undertakings.

Against deposits received at home, reserves are to be at least 13 per cent, as cash in vault or balances with Federal Reserve Bank or banks in reserve system. In the case of deposits received abroad, reserves are to accord with the laws of the country in question and the dictates of sound business and banking.

As outstanding on account of acceptances, average domestic and foreign deposits, securities issued, guaranties, endorsements or other such obligations, the liabilities may not exceed 1,000 per cent of the subscribed capital and surplus, unless the Reserve Board gives permission to go above this figure. Endorsements of bills of exchange which are drawn and accepted by others, and which have not more than six months to run, are not counted as liabilities.

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Nature's Limit

Do you know the workings of the grim Law of Diminishing Returns? It controls the destinies of your family, your business, your nation; and no legislation can repeal it

By HOMER HOYT

Professor of Economics and Business Administration, Delaware College

IF SOME business philosopher should break off a tiny chunk from any part of our industrial mechanism and examine a cross-section of it under the microscope, he would find three distinct kinds of matter known as land, labor and capital. Not a single business molecule, whether it be a small shop, a farm or a room in a big factory, would lack any of these three elementary economic substances.

Viewed on a grand scale from a great aeroplane, the business world would appear to be a gigantic aggregate of land, labor and capital. Millions of human beings would be seen using their brain and muscle-power to direct the huge engines and furnaces of capital in the subjugation of land. Land is composed of many physical elements; it includes the mines below the surface as well as the soil and the trees above the surface, and it comprises the powers of sun, wind, and rain which are part and parcel of the ownership of the soil.

Capital is split into a myriad of shapes, and it calls hammers and plows its own, as well as railroads, shops and foundries. Labor takes the form of millions of human faces, millions of pairs of arms of varying strength and millions of brains of varying intelligence.

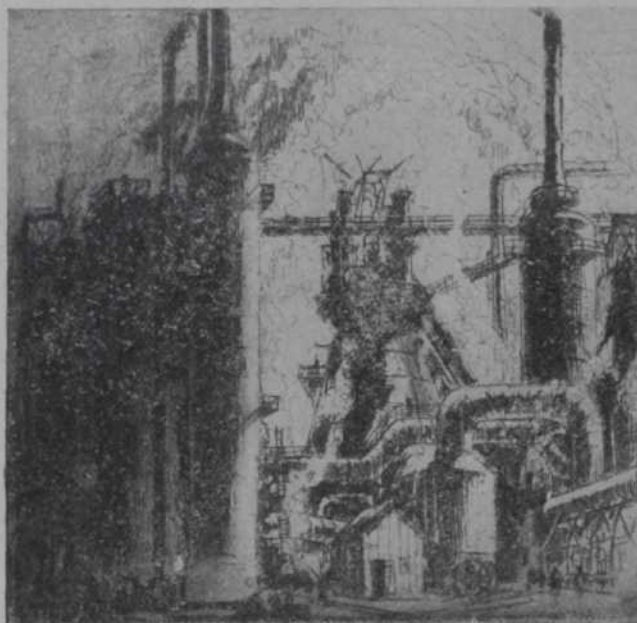
Thus land, labor and capital are by no means homogeneous within their own ranks. Yet each stands as a separate and distinct economic substance. Without the presence of all three of these vital forces there can be no production. In fact it is from the reaction that results from mixing these three economic agents that the productive power of the world is generated.

Searching for the Right Mixture

THERE must be some land, some labor and some capital in every factory and on every farm or the factory and farm will remain lifeless and inert, profitless and barren. But while any combination of the three vital factors will cause the motor of industry to begin to hum, there is in every case a certain right combination that will yield the maximum results for the given expenditure of effort.

How many units of man-power must we mix with an acre of land and a ton of capital to give us the greatest number of dollars of income for each dollar of cost? The solution of this problem is of the utmost importance to private business life and to the collective interest of great bodies of men and women grouped in nations.

To obtain a correct recipe for mixing land, labor and capital our business philosopher might ascend in his aeroplane and sweep the earth with his telescope. He will see certain parts of the earth, labelled on the map "China" and "India," where the labor atoms are so numerous in proportion to the land and



Courtesy the Spicer Mfg. Co.

The biggest steel plant and the smallest farm are alike in that their fate depends on the successful combination of three elements: land, capital and labor.

capital atoms that the total production is small and the labor atoms are feeble and emaciated.

He will see other parts of the earth labelled "Australia," "South America" and "Africa," where the land atoms are numerous and abundant but where the labor and capital particles are too few to insure a large production. While the labor particles are well fed in these sections, there still remain great unabsorbed units of land which have not been attacked by the labor or capital atoms, and which consequently have not given off any productive power.

Then our business philosopher will see another section of the world labelled "Europe," where the proportions of land, labor and capital are fairly well balanced, but where the productive reaction is sluggish because a destructive war has just crippled the labor atoms, destroyed many of the capital atoms, and torn up some of the land atoms.

Finally, the gaze of our philosopher will rest upon the North American continent—particularly upon the United States. There he will see a balancing of the three factors that is the most productive of results. The labor atoms are abundant enough to react vigorously upon the particles of land and capital, but not so plentiful that unemployed labor atoms are floating around without capital or land to operate upon.

There are, on the other hand, no unabsorbed pieces of land and capital. In spite of some temporary inertia due to strikes, there is on the whole a vigorous productive reaction,

and every particle of the economic organism seems well nourished and well satisfied.

The surplus labor atoms in Europe and Asia tend to flow automatically to places where there are unemployed land and capital atoms, such as in the Americas and Australia. But man-made barriers, such as oriental exclusion acts and literacy tests, prevent many of the excess labor atoms of Europe and Asia from coupling up with their economic affinities that are situated on other continents.

The proportions of land, labor and capital in any one country are beyond the control of any one man. The extent and quality of land are unalterably fixed by nature, the quantity of capital is determined by previous production and the thrifty impulses of masses of people, and the number and fitness of the population depend upon sexual impulses and the standard of living of the multitude.

The national supply of land, labor and capital to some extent controls every business man within the nation. Thus a business man in China will mix a relatively large amount of the cheap labor with a small amount of land and capital, while the business man in America will do exactly

the opposite, or he will use relatively little of the expensive labor with much land and capital.

Yet every business man must determine for himself, by experimenting, exactly what proportion of land, labor and capital to use in his own shop. He can buy labor, land or capital in the market in almost any quantities. While the ultimate supply is limited, while the price of land, the interest on capital and the wages of labor are determined by the broad social forces over which he has no control, by paying the price fixed by demand and supply he can obtain varying quantities of each of the three factors, and he can experiment with these varying quantities until he hits upon the most profitable combination.

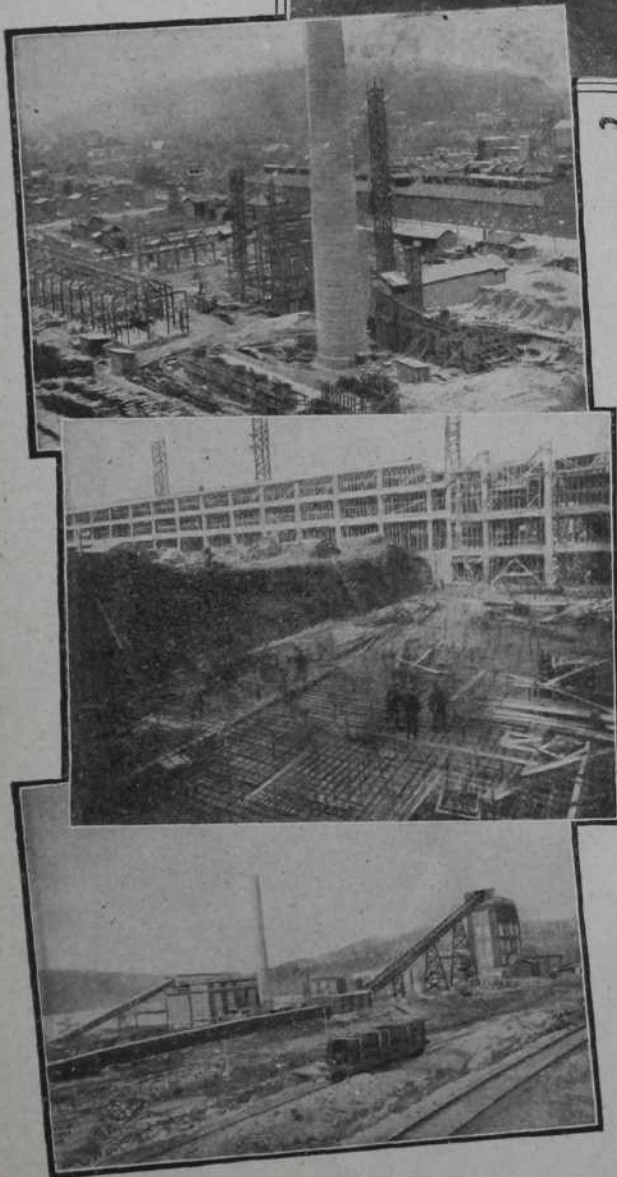
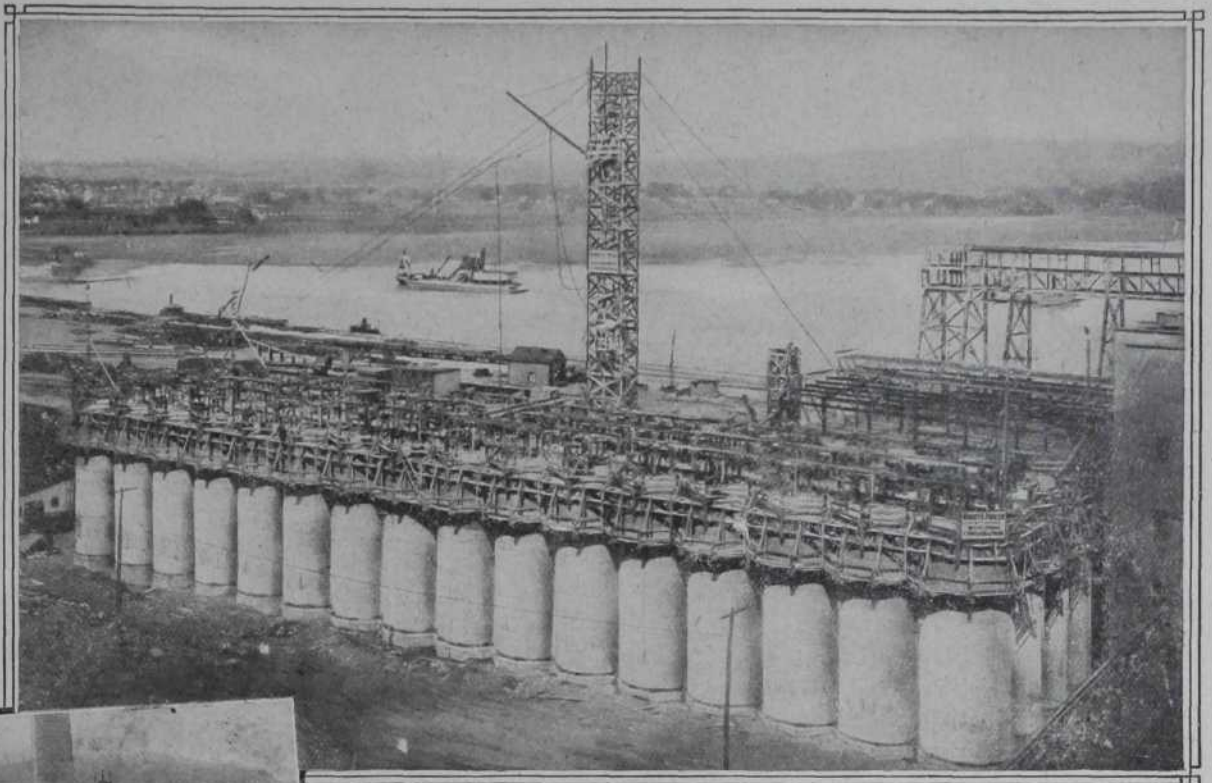
Take the Case of a Farmer

SUPPOSE a farmer who owns a 160-acre farm and a given equipment of farm implements begins the experiment to determine how he should operate his farm to secure the greatest returns for the effort expended. He can change his combination of land, labor and capital by using more or less land, by employing more or less labor, or by using more or less farm implements.

Suppose he keeps the land and capital factors constant and varies the proportions of the factors by increasing the labor factor. He starts out the first year and employs only one man to work the entire farm. He finds at the end of the year that he made a mistake, because the one man could not cultivate the land often enough at the critical time when

Fuller-Built Landmarks

1. Grain Elevators at Quebec, Canada.
Harbour Commissioners Engineers.
2. West Virginia Pulp & Paper Co. Plant, Tyrone, Pa.
F. G. Ten Broeck, Engineer.
3. Addition to Ford Motor Plant, Detroit, Mich.
*Albert Kahn, Architect.
Ernest Wilby, Associate.*
4. Kipawa Co. Pulp, Paper & Sulphite Plant, Temiskaming, Canada.
H. S. Ferguson, Engineer.



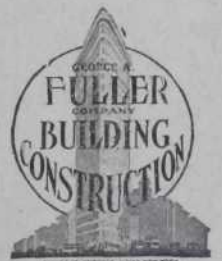
When we build by the Acre

The covering of acres of country, with the many widely different types of structures that go to make up modern industrial plants, is an important part of the building activity of the Fuller organization.

The four plants here shown cover a large total of acreage—but, even more important, they give some indication of the vast diversity of our building operations.

The economy of building at any time lies in building right.

The Fuller Industrial Engineering Corporation supplements the building service of the George A. Fuller Company with expert engineering ability capable of handling the designing and equipping of industrial plants of all kinds with maximum speed and economy.

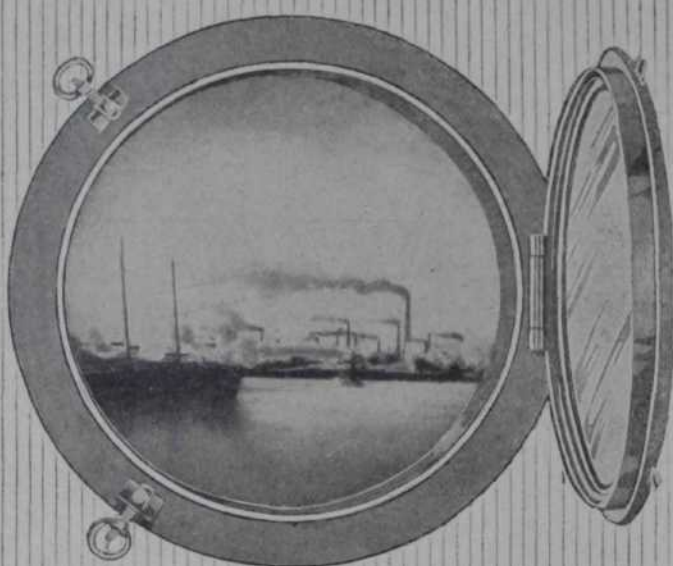


George A. Fuller Company

New York
Boston
Philadelphia
Montreal
New Orleans

Washington
Baltimore
Pittsburgh
Cleveland
Kansas City

Chicago
Detroit
St. Louis
Buffalo
Shipyard
Wilmington, N. C.



Travelers—the world over —find New England's

products on sale. From the shops of London and Paris to the street-stalls of the Orient, the trade-mark of the "Yankee" symbolizes quality and square dealing.

New England investments are backed by the world-wide reputations of these manufacturers. They are eminently safe and yield liberal returns.

*Ask us to send you Booklet "N. B. 291,"
"Safeguarding Your Investments"*

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R. I.

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Mass.

Pittsfield
Mass.

Portland
Me.

the crop was "making." His crop is very poor—only 5 bushels of wheat to the acre. The next year he profits by his mistake and hires two men. The result is that the crop is better tended when it needs it the most and a return of 20 bushels to the acre is realized. By a doubling of the quantity of labor, the crop has been increased fourfold.

"Aha," cries the farmer, "if two men will produce four times as much as one, why will not four men produce four times as much as two or sixteen times as much as one?"

So he hires four men during the third year. Much to his disappointment, however, the crop is only 30 bushels to the acre, although the season has been as good as in the other two years. By doubling his labor this time, he increased his return only 50 per cent. The returns per laborer are diminishing. Whereas the first two men working together averaged 10 bushels an acre apiece, the four men working together have produced only $7\frac{1}{2}$ bushels apiece, and the last two men have added only 5 bushels apiece to the crop of the first two.

Despite this relative decline the farmer doubles his labor again, hoping to beat Nature at her own game. Eight men are employed the fourth year. The crop is only $37\frac{1}{2}$ bushels an acre. An absolute increase of 25 per cent to be sure, but bought by an expenditure of 100 per cent more labor. At the end of the fourth year, the farmer gets out his pencil and begins to figure.

The last four men hired added only $7\frac{1}{2}$ bushels to the crop per acre, or less than 2 bushels an acre for each man. Or each of the last four men added 300 bushels to the crop of the entire 160-acre farm. Wheat is worth \$2.50 a bushel; the wages of each man came to \$1,000 a year. The value produced by each of the last four men was 300 times \$2.50, or \$750, while the cost to the farmer was \$1,000.

The farmer thus lost \$250 on each of the last four men.

He failed to beat the law of diminishing returns.

He will realize next year that he can not keep on increasing his crop in proportion to the rate of increase of one of his factors. Next year he will discharge four of his laborers with the result that he will get a smaller crop but still a greater number of dollars for each dollar expended.

This is the celebrated law of diminishing returns that controls the destinies of men and nations. This grim law of economics can be repealed by no human legislature, it can be defied with impunity by no despot, it cannot be bent by the weight of millions of men hurled against it, and all the artillery in the world would not make the slightest dent in it.

The Check on Multiplication

IT sets a hard and fast limit upon the numbers of human beings that can inhabit this planet, for it warns us that after a country is peopled up to a certain point the hands of every new-born babe have not the potential power to feed its mouth. More laborers can be born than can find capital and land to work with unless a check is imposed upon the multiplication of the human species.

Because this check has been imposed in America by our high standards of living, the American laborer sits down to his daily meat and rides to his work in his Ford car. Because the checks on population have not been observed in China, the Chinese coolie must be content with his meager bowl of rice, and he must eke out a miserable existence constantly haunted by the gaunt specter of famine.

Because the numbers of Germans multiplied until they beat against her boundaries



WHEN a sudden gust of wind catches you and makes it difficult for you to walk, you get some idea of the strength in moving air. But when air acts kindly it dries drenched, impassable roads; turns windmills; supplies power to sailboats — performs a thousand services for man.

Sturtevant Apparatus makes the air act kindly every day; makes it hold just the right amount of heat and moisture; makes it blow hard or easy in any direction; makes it convey heavy bricks and light cotton—makes it do more kinds of work than most manufacturers realize.

Fresh Air Lowers the Sick List

The attendance records of a large insurance company showed that, in a room of eighty clerks, an average of eight remained away all the while. The office force was depleted ten per cent the entire year because of ill health.



A Sturtevant Ventilating and Air Conditioning System was installed. Absence dropped to almost nothing. This particular ventilating equipment paid for itself in a very short time.



The benefits of good ventilation are even more noticeable in factories and in those industries where the manufacturing processes contaminate the air.

*Consider
the
Destroyer*



The destroyer of our era is propelled by coal or oil. But air is also used; sometimes to suck coal from the bunkers; sometimes to cool the wireless spark. Air apparatus keeps the engine room cool, and mechanical draft permits the fires to give greater heat and enables the destroyer to make 35 knots an hour. In the ship's kitchen and laundry, air equipment takes care of all excessive moisture, smoke, bad odors, and intense heat.



Many factories can take a lesson in efficiency from a Sturtevant-equipped destroyer, for there is hardly an industry in which air is not doing some work quicker and better than it was formerly done.

Sturtevant Service insures that every Sturtevant product be used in the place and way it should be used. Sixty years of experience are behind every Sturtevant product and every Sturtevant recommendation.

If you will write us the nature of your business, we will send you the bulletin which tells how air can be made to do your work. If you specially request, one of our representatives will visit you at your plant. Address

B. F. STURTEVANT COMPANY

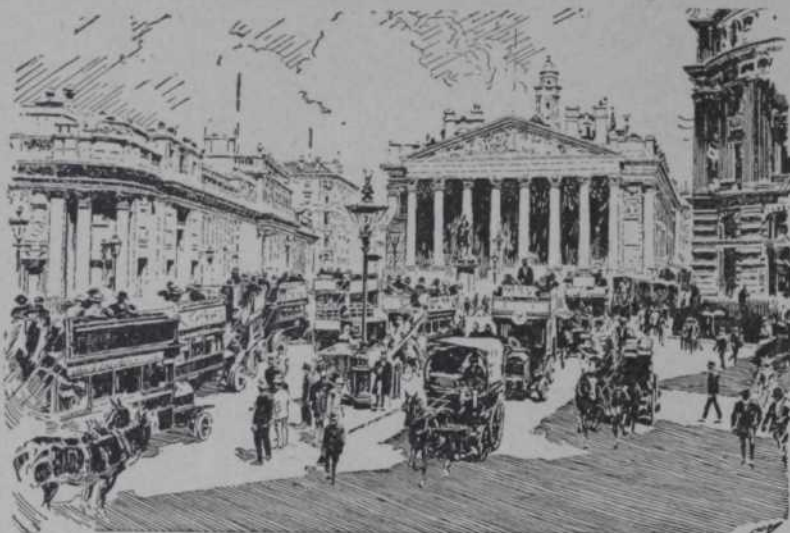
EUGENE N. FOSS, President

Hyde Park, Boston, Massachusetts

or one of the following 24 branch offices in the United States and Canada

Atlanta, Ga.	206 Walton Bldg.	Detroit, Mich.	406 Marquette Bldg.	Pittsburgh, Pa.	711 Park Bldg.
Boston, Mass.	555 John Hancock Bldg.	Hartford, Conn.	36 Pearl St.	Rochester, N. Y.	1108 Granite Bldg.
Buffalo, N. Y.	101 Bedford Ave., Nye Park	Kansas City, Mo.	412 Reliance Bldg.	St. Louis, Mo.	2086 Ry. Exchange Bldg.
Chicago, Ill.	530 S. Clinton St.	Minneapolis, Minn.	804 Metrop. Life Bldg.	Salt Lake City, Utah	Walker Bank Bldg.
Cincinnati, O.	604 Provident Bank Bldg.	New York, N. Y.	52 Vanderbilt Bldg.	San Francisco, Cal.	759 Monadnock Bldg.
Cleveland, O.	330 Guardian Bldg.	Philadelphia, Pa.	135 N. 3rd St.	Seattle, Wash.	1134 Henry Bldg.
Dallas, Tex.	3411 Knight St.			Washington, D. C.	1006 Loan & Trust Bldg.
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STURTEVANT ENGINEERING COMPANY, LONDON



The Bank of England and the Royal Exchange

—in London

LONDON is more than a seat of empire—it is a capital of finance and commerce. And America's world-wide foreign trade and financial interests make it more essential than ever that the great financial centers—London and New York—shall function in close relationship.

This Company has two London Offices, the first having been established more than twenty years ago. They are American banks conducted on American lines.

American concerns doing business abroad can enjoy an unusual advantage in the interest rates paid on balances maintained with this Company in London. In addition, they are afforded facilities for complete banking service, and for credit and trade information.

Guaranty Trust Company of New York

New York London Liverpool Paris Havre Brussels

Capital and Surplus - - - \$50,000,000
Resources more than - - - \$800,000,000

in the hope of gaining a place in the sun, while France maintained a stable population which the French soil could support, a terrible war was thrust on the human race. A population expanding faster than land or capital is the instigator and the means of war, it impels the desire to expand, and it furnishes the cannon-fodder to bring about that expansion by force of arms.

There is no species of plant or animal life that is not biologically capable of filling the earth with its kind. Each tends to outrun the means of its support, and the human race is no exception. We, too, must bow to the inexorable law that governs the plant and animal kingdom. We boast of our machinery that increases our production thirty-fold, and it is true that every new invention makes it possible for the earth to support more human beings. If we could draw nitrogen directly from the air for food, if we could harness the tides, this planet might well support billions of people. But so far, while we have constantly relieved the pressure of population upon our land and capital, the pressure in some parts of the world is ever intensified again by expanding population.

Is the law of diminishing returns harsh after all? Is it not better to have quality instead of quantity, better human beings rather than more, 100,000,000 contented, healthy, happy Americans rather than 400,000,000 starved Orientals, a family of two or three well-educated children rather than eight or ten sentenced to lifelong drudgery in factory or mill?

We in America have answered this question, and we have answered it in the affirmative.

CANADIANIZATION is the form which Americanization takes in the land of our neighbor on the north.

STATEMENT of the Ownership, Management, Circulation, Etc., required by the Act of Congress of August 24, 1912, of The Nation's Business, published monthly at Washington, D. C., for April 1, 1920.

City of Washington, District of Columbia, ss.: Before me, a Notary Public, in and for the State and District aforesaid, personally appeared John G. Hanrahan, Jr., who, having been duly sworn according to law, deposes and says that he is the business manager of The Nation's Business, and that the following is, to the best of his knowledge and belief, a true statement of the ownership and management of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in Section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager, are: Publisher, Chamber of Commerce of the United States, Mills Building, Washington, D. C. Editor, Merle Thorpe, Mills Building, Washington, D. C. Managing Editor, Frank S. Tisdale, Mills Building, Washington, D. C. Business Manager, John Hanrahan, Jr., Mills Building, Washington, D. C.

2. That the owners are: Chamber of Commerce of the United States of America, said body being an incorporated organization under the laws of the District of Columbia, its activities being governed by a Board of Directors.

3. That the known bondholders, mortgagees, and other security holders, owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the names of the stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest, direct or indirect, in the said stock, bonds, or other securities than as so stated by him.

JOHN G. HANRAHAN, JR.,
Business Manager.

Sworn to and subscribed before me this first day of April, 1920.

(Seal) ADELAIDE SPRECKELMYER, N. P.
(My commission expires June 2, 1924.)



*At
Lake Louise*

Come Early to Canada this Year

WITH a blaze of flowers and long sunny days, June swings over the glistening peaks into the Alpine Valleys of the Canadian Pacific Rockies.

Sunny days that herald the four radiant months of the Canadian Summer offer the alluring charms of this Mountain Garden of the Giants to the tourist, the lover of the wild the vacation seeker.

Trails to walk and ride upon, roads for tally-ho or motor, mile-high links for the golfer, peaks, snow-passes and glaciers for the Alpine climber, warm sulphur swimming pools, luxurious hotels at Banff and Lake Louise, with music, dancing and social recreation, mountain chalets at Emerald Lake and Glacier, trout fishing in season, superb scenery and big game for the camera (or in September for the rifle) opportunities for camping in regions of unparalleled majesty—these are but a few of the delights in store for you.

Nothing is more distinctive in North America.

So easy to reach by the

CANADIAN PACIFIC RAILWAY

Come Early and Stay Late

Write, or call, for particulars

Canadian Pacific Passenger Offices and Agencies in the United States

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Chicago, Ill.	140 South Clark St.
Cincinnati, O.	430 Walnut St.
Cleveland, O.	1040 Prospect Ave.
Detroit, Mich.	199 Griswold St.
Los Angeles, Cal.	605 South Spring St.
Minneapolis, Minn.	611 Second Ave. South
New York, N. Y.	1231 Broadway, cor. 30th St.
Philadelphia, Pa.	629 Chestnut St.
Pittsburgh, Pa.	340 Sixth Ave.
Portland, Ore.	55 Third St.
St. Louis, Mo.	418 Locust St.
San Francisco, Cal.	657 Market St.
Seattle, Wash.	608 Second Ave.
Tacoma, Wash.	1113 Pacific Ave.
Washington, D. C.	1419 New York Ave.



Banff Springs Hotel

W

ENTHUSIASM

ENTHUSIASM is the lubricant that overcomes friction in production—the use of good tools promotes and encourages Enthusiasm. In this period of insistent demand for the products of manufacture the importance of anything that tends to increase the output of man or machine is strongly emphasized.

Williams' Drop-Forged Machinists' Tools are sturdy and dependable—they have made good in quality and efficiency for nearly half a century. Their reputation is thoroughly established. Ambitious operators welcome an opportunity to use them, for "Better tools make better workmen."

An inspection of your equipment *now* may indicate where you could obtain increased production, or improved quality or both, through the lubricant of Enthusiasm, stimulated by the use of Williams' Superior Drop-Forged Machinists' Tools.

Copy of our new Machinists' Tools Book will be sent on request.

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The Truth About Coal Profits

COAL MINING seems to remain a hazardous business, notwithstanding sundry pronouncements implying it is a sure road to opulence. Figures compiled by the Bureau of Internal Revenue show that in 1918 something like 22 per cent of the companies mining bituminous coal had net losses, and almost a third of this class showed losses averaging 49 per cent on capital invested. At the same time, 11 per cent had net income of less than 5 per cent on invested capital and averaged but 1.94 per cent after paying taxes. In fact, 40 per cent of the companies had net profits which, after payment of taxes, left less than 11 per cent on invested capital. Half of our bituminous coal was produced by the 62 per cent of companies that either had deficits or showed less than 11 per cent in profits after paying their taxes to the United States.

Large earnings would seem accordingly to be confined at most to 38 per cent of the companies. About 23 per cent, producing approximately one-third of our supply of bituminous coal, had net income ranging between 20 and 50 per cent, but even the highest group of them averaged 16 per cent after meeting their tax obligations. Ten per cent, accounting for about 10 per cent of output, showed profits ranging from 50 to 100 per cent on invested capital, and the most prosperous group of this class kept 29 per cent after seeing the collector of internal revenue.

The Fortunate Few

LESS than 4 per cent, producing under 3 per cent of the coal, showed from 100 to 200 per cent on their tax returns, and the most fortunate kept 63 per cent, but they were relatively small, having on the average but \$35,000 invested, and having apparently been placed in especially advantageous situations by war conditions. The remainder accounted for less than a day's output of the country's coal supply and had invested capital averaging below \$15,000. Even the most prosperous of these small concerns, which obviously found a chance to have a big output without increasing capital, made money for the Government as well as for themselves; two of them together paid \$67,000 in income and excess-profits taxes and put \$58,000 into their treasuries.

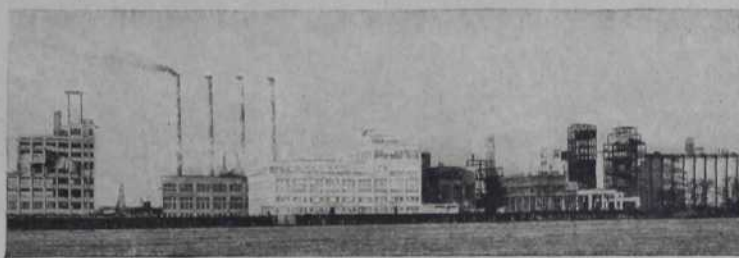
From the standpoint of employees and employers in coal mining, according to the majority of the Bituminous Coal Commission, the industry has yielded a hazardous return.

Chambers of Commerce in China

AMERICAN Chambers of Commerce in China will have to look to their laurels if they would keep up with their British contemporaries.

There are no less than sixteen British Chambers of Commerce in China, all the way from Harbin on the north to Heng Kong on the south and as far as Chungking toward the west. That means well over a thousand miles inland, at a point where American interests are represented by two branch houses of American importing concerns.

As for the Chinese themselves, they have Chambers of Commerce in every place of any importance, no matter how far inland. And every trade and industry, including the business of street begging, has its guild, each guild being in many ways a branch of the local chamber.



CORN PRODUCTS PLANT, ARGO, ILL.

CONFER A FAVOR AND WE WILL CONFER A SERVICE!

Give us the privilege of an interview whereat we can discuss the various angles of your proposed building or engineering problems, and we will give you the benefit of twenty years' cumulative experience in its application to your particular needs.

We are not only contractors and engineers, but advisors, competent to tell you whether or not your ideas are right and courageous enough to tell you if they are wrong.

You have to talk to us to hire us, but you don't have to hire us to talk to us.

Our Advice is as Good as Our Service

THOMPSON-STARRETT COMPANY

INDUSTRIAL CONSTRUCTION

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This Box Construction Based on Scientific Tests

We are not content to let long experience alone determine our advice to shippers as to the best shipping containers for their products. Every box that bears our recommendation has been tested in our research laboratory for strength of construction.

The Hinge-Corner Box is one example that offers sound protection combined with unusual economy. It can be made for single service use or as a returnable box.

Our records and box tests are helping manufacturers put their shipping departments on an efficient and economical basis. The resources of thousands of acres of standing timber, logging camps, sawmills, paper mill and box factories strategically situated for distribution, assure prompt deliveries and effect immense savings in shipping box economies.

Write and have your name put on the mailing list of "Boxes," a practical monthly magazine devoted to shipping problems. Sent to you upon request.

CHICAGO MILL AND LUMBER COMPANY

Box Makers

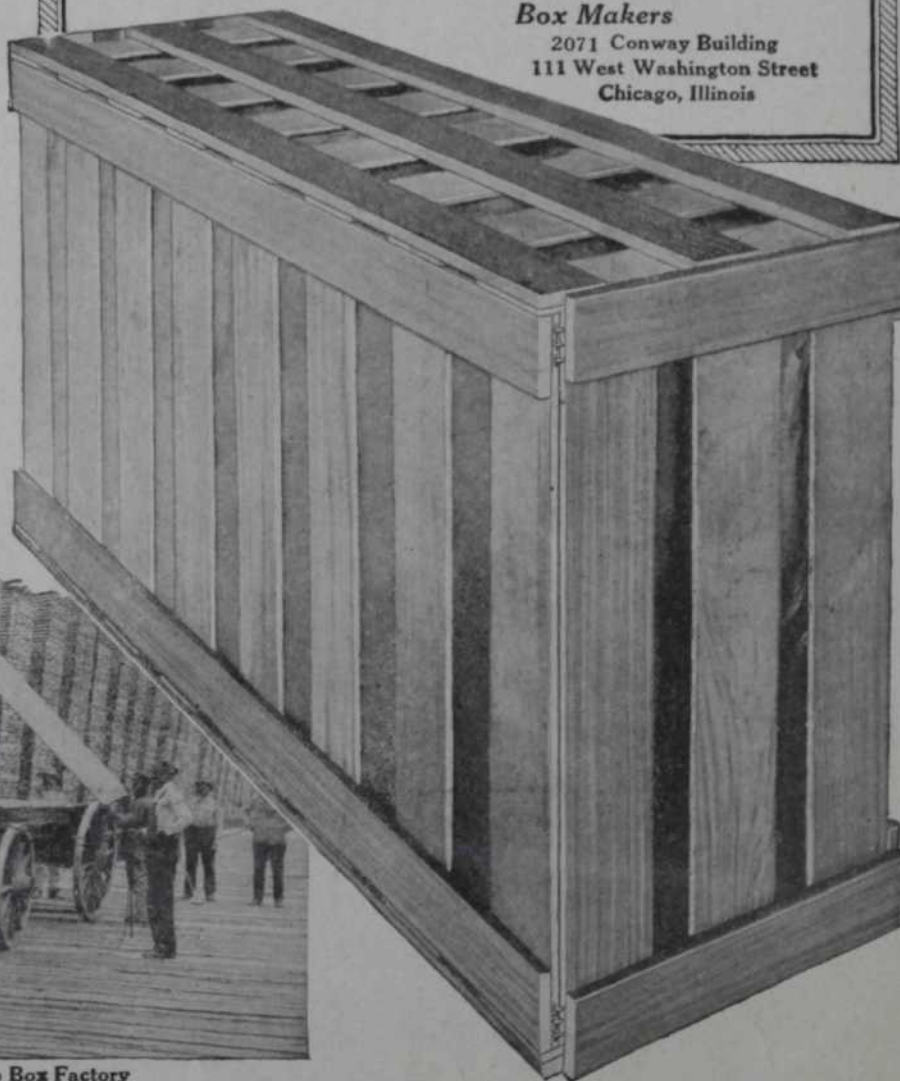
2071 Conway Building
111 West Washington Street
Chicago, Illinois

*We also make these
types of boxes*

**Solid Fibre
Corrugated Fibre
Wire Bound
Hinge Corner
Wooden (made up
or knocked down)**



From Lumber Yard to Box Factory



Foreign Exchange and the Farm

THE BLACK TOBACCO PATCH has not come to the notice of many good Americans, but in that respect it resembles some other districts of the country which have had an important place in our export trade and a real concern in foreign exchange and its recent vagaries.

As a patch, it is sizable, occupying an area 250 miles long and 100 miles wide in Tennessee and Kentucky. The tobacco of this region is very heavy and has been sold mostly in Italy, Austria, and France. Exchange rates have made themselves felt in this interior agricultural region, by demoralizing the foreign markets for its thousands of farmers.

A New Name for an Old Disease

BECAUSE the name is a new one, the popular conception is that Bolshevism is a brand-new scourge. The idea is a mistaken one, according to C. C. Hanch, general manager of the Maxwell Motor Company, Inc. Mr. Hanch claims that it is simply a fresh label on an ancient human weakness. He says:

"Bolshevism is a new name for a very old human failing, viz., a desire to get something for nothing. It did not originate in Russia, and it exists in all countries.

"This desire manifests itself in several ways, some of which are as follows: Acquiring property by taking forcible possession thereof; acquiring control of property without representing its rightful ownership; receiving or demanding compensation without giving adequate service in return.

"A burglar or foot-pad is a first-class Bolshevik.

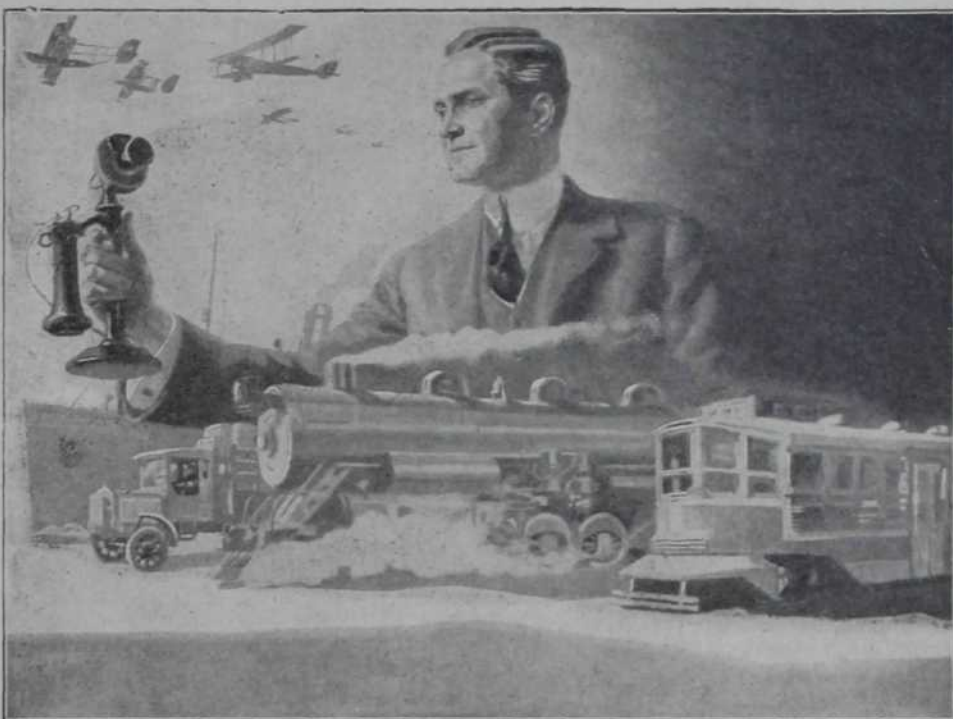
"A socialist who does not recognize individual property rights is a Bolshevik.

"An employe who gives the equivalent of four hours' work and receives or demands eight hours' pay is a Bolshevik.

"Bolshevism has but one antidote, namely, governmental initiative to protect life and property. This initiative is the fundamental function of all successful government and must be backed up by force when necessary. Loss of this initiative is invariably followed by anarchy—the condition through which Russia is now passing. Unrestrained anarchy always cures itself by reason of the fact that anarchists who acquire property unlawfully become converts to the system of organized government, in order to protect themselves in the possession of such property against other less favored anarchists or Bolsheviks.

"The anarchy of Russia is now being cured by this process. From the first moment that the Russian Government lost its initiative to protect life and property no other cure could be anticipated, and the feeble efforts of other governments to arrest the process of evolution have been entirely impotent, as might have been expected. Nothing less than armed intervention with sufficient forces to effect conquest can restore any former government which has succumbed to anarchy and Bolshevism."

NON-RESIDENCE does not help a man avoid a tax on income levied by a state in which he actually gets income through business operations. That was the decision of the Supreme Court on March 1, when it passed upon laws of Oklahoma and New York. But a state cannot discriminate against a nonresident, the court said, and for that reason the court found some fault with the New York law.



The Measure of Progress

The progress of the past, as well as that of the future, is measured by criticism—for criticism exists only where there is faith in ability to improve.

We do not criticise an ox cart or condemn the tallow dip, for the simple reason that they are obsolete. During the reconstruction period through which our country is now passing, if the public does not criticise any public utility or other form of service, it is

because there seems little hope for improvement.

The intricate mechanism of telephone service is, under the most favorable conditions, subject to criticism, for the reason that it is the most intimate of all personal services.

The accomplishment of the telephone in the past fixed the quality of service demanded today; a greater accomplishment in quality and scope of service will set new standards for the future.



**AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES**

One Policy

One System

Universal Service

Spring Enters with Comforting Paradoxes; One Is That Bees Last Year Produced Half as Much Wealth as Our Gold Mines!

By ARCHER WALL DOUGLAS

WITH the passing of the winter of our discontent the business world is like unto the Jungle Creatures in Kipling's story who experienced the "Spring running in their blood." Doubts, apprehensions, and questionings concerning the future suddenly, and simultaneously, all over the country seem to have resolved themselves into two apparently contradictory and conflicting conclusions.

First, that the peak of high prices has, in general, been reached, but that a sudden decline, such as ushered in the

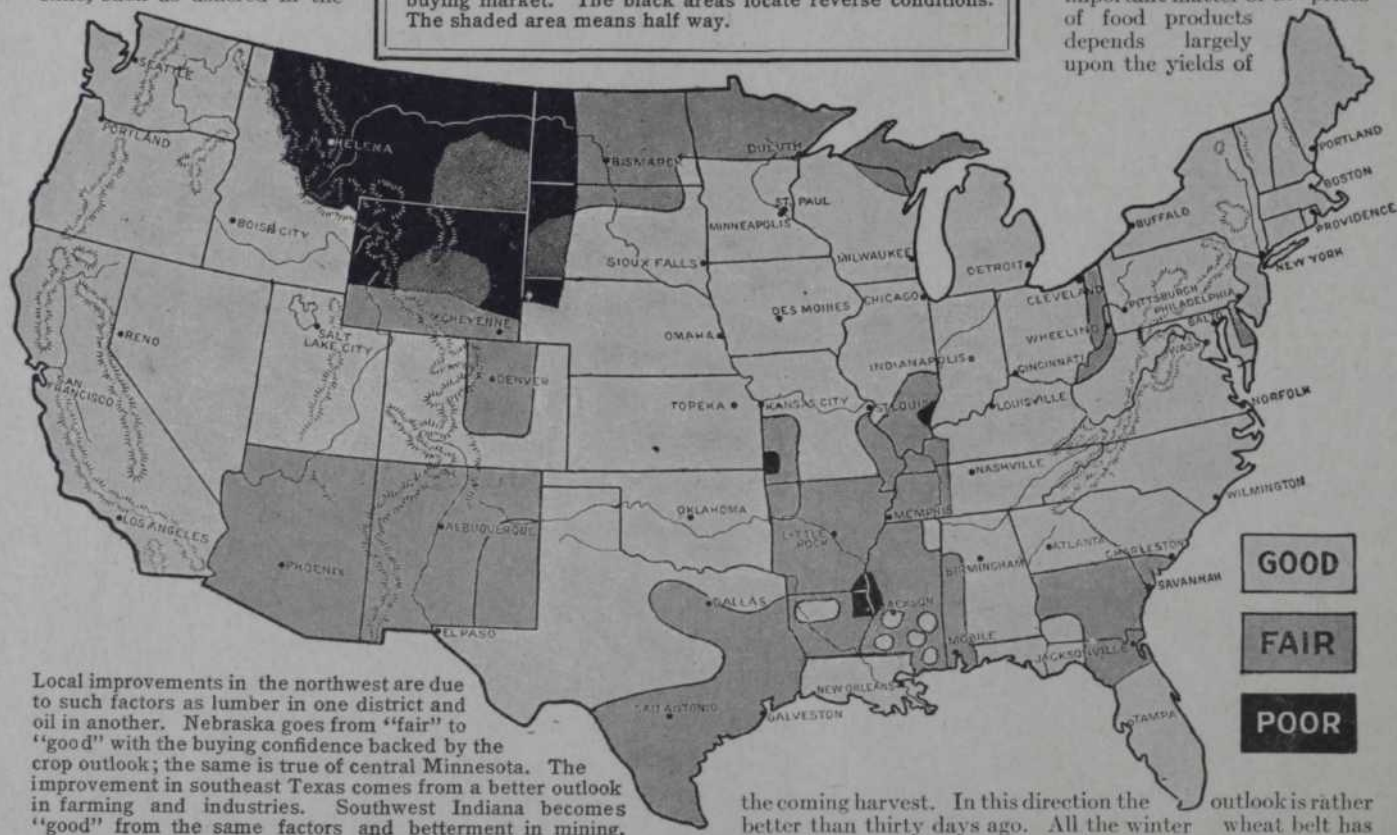
The copper market has spasms of hopefulness because of that old stuff about large demands from Europe, which, like everything else about European buying, has a string attached to it, until the proposed plan of marketing copper abroad can crystallize into a certainty.

In iron and steel lines both scarcity and rising prices continue in finished materials, nor is there any immediate promise of that period when the fulness of supply will usher in a period of declining prices.

What will happen in the all important matter of the prices of food products depends largely upon the yields of

Business Conditions, April 11, 1920

THE map shows at a glance the general business conditions of the country. It is prepared by Mr. Douglas as a weather map of business, and should be so read. The light areas indicate large bank deposits, promising crops, industrial activity, evidence of an economic evolution, creating new needs in home, shop, and farm—in a word, a "high pressure" buying market. The black areas locate reverse conditions. The shaded area means half way.



Local improvements in the northwest are due to such factors as lumber in one district and oil in another. Nebraska goes from "fair" to "good" with the buying confidence backed by the crop outlook; the same is true of central Minnesota. The improvement in southeast Texas comes from a better outlook in farming and industries. Southwest Indiana becomes "good" from the same factors and betterment in mining.

cataclysm of 1907-08, does not seem imminent. But rather a long, gentle gradient to which we will gradually accustom and readjust ourselves from time to time. The second conclusion, therefore, is that in spite of the prospect of lower prices in the near future, it is still safe to go on buying and selling in liberal measure, meanwhile keeping our weather eye on the buying temper of the consumer, and governing ourselves accordingly.

There is a good deal of mention in some trade reports as to a sobering down in purchasing by the many, and a diminution in extravagant spending. To those in actual touch with the situation, this seems a wish that is father to the thought, for there is little in evidence to warrant any such conclusion.

The general sentiment finds expression in the price movements of various staple commodities. Leather goods and textiles are firmer after an opinion about them, which uncertainly "sashayed" back and forwards, about over supplies, and top heavy prices, and finally settled down to a feeling that the present was all right, and that the future could better be judged some months later.

the coming harvest. In this direction the outlook is rather better than thirty days ago. All the winter wheat belt has sufficiency of moisture, and the growing plant has revived accordingly in sections where it seemed beyond resurrection. It is much too early to hazard a guess as to what the actual yield will be, especially in view of the uncertainty of the amount of abandoned acreage, and the damage already done, and yet to be done, by the Hessian Fly.

Until we can "get a line" on the agricultural outlook, as a whole, all schemes and methods, governmental and private, to bring down the cost of food products are mere waste of time, and not worthy of serious consideration. The utter futility of all such enterprises in the past should be the measure of our faith or rather our credulity, in them for the present. Especially is this true of that phase known as price fixing, which, in the end, usually results in a boomerang to the consumer. If official regulation can prevent monopoly and undue control by those interested, it has done all that can be asked of it. There are certain immutable laws of supply and demand which, if allowed free play, take care of any situation. Nor has any economic Einstein discovered a fourth dimension to supplant or even permanently modify their action.

Wet weather everywhere is delaying planting, cultivation and



Picture-power! Could you tell how Napoleon looked if you had never seen his likeness? That new plan or design of yours—can you by mere words get other people to visualize it? You can quickly and easily put pictures or designs in your letters, bulletins, instruction sheets, etc., if you use the *Mimeoscope*, a simple contrivance which tremendously extends the usefulness of the Mimeograph. With it drawings, pictures, electrical and mechanical diagrams, designs, maps, plans, forms, etc., are traced upon the Derratype stencil and speedily printed. No especial experience or skill required. Typewritten matter and drawings duplicated in one operation on the same sheet. No expensive plates, no type forms to set. Five thousand well-printed sheets an hour—and no time wasted in getting ready. Napoleon defeated the Austrians because, he said, they did not know the value of ten minutes. Here is an hour and a dollar saver. An idea well pictured is rarely forgotten. Booklet "N" tells you all about the Mimeoscope and the Mimeograph. A. B. Dick Company, Chicago—and New York.



B



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all other farm work. This, however, is the familiar story of almost every spring at this period. Were it not so, it would be an omen of sinister portent. For a dry spring is the sure harbinger of small crop yields. There will probably be more cotton planted than last year, and, likewise, more corn and oats, and more feed stuff for live stock.

Fruit has been severely damaged locally in many states by cold weather. Garden truck also suffered extensively from frost and freeze. There is a distinctly better agricultural outlook in Montana and those portions of Wyoming and the two Dakotas which were so hard hit last year by drought. Local sentiment is therefore correspondingly cheerful.

Pastures and ranges for live stock are practically everywhere in good condition. But severe cold weather did much damage to the herds on the Northwest ranges.

Oil development continues unabated in the Southwest where hope springs eternal in the breast of the driller and speculators despite many dry wells. Every now and then "wild catting" strikes some flowing well, and develops some new and profitable field. As a real gamble, oil exploration makes even crap shooting seem like a tame and orderly venture.

It is one of the significant symptoms of the time that building continues in large volume, despite all the expense and difficulties it encounters.

Butter from Denmark!

IT IS one of the interesting phases of the situation that we are importing butter very largely both from Canada and Denmark. For the home demand is extraordinarily heavy, and the supply increases slowly though steadily. One of the invariable symptoms of prosperity and generally high wages is the great increase in the consumption of food products, especially such items as eggs, butter and the better cuts of meat. In some commodities, especially beef and pork products, soon there will be released new supplies for domestic use, as exports to Europe are largely declining.

One of the wealth producers of the country is the busy bee, who, in 1919, made two hundred and fifty million pounds of honey, worth about fifty million dollars, or more than half the entire gold production of the United States, including Alaska. Yet the gold seekers and gold miners occupy several hundred times the place in literature and the movies that does the wise little insect. Bee keepers are an intelligent and canny lot and put one over on their industrious employees in the shape of an income tax which most governments today seem anxious to emulate. It takes away just enough honey from the untiring insect to keep it hustling all the time to provide itself with a comfortable living.

There is general approval of the return of the railroads to private ownership, save among those employees to whom the railroad administration was, in Hindoo phrase, their father, and mother and all the rest of the family. What every one wants and expects are better service, more efficiency among employees, and less extravagance in administration than characterized government ownership. Consequently the attitude of the public towards the present owners will depend largely upon what the various managers can do, or at least indicate their desire to do, in the way of satisfying these requirements. More than at any time within a score of years is the attitude of the public that of a detached point of view—neither favorable nor unfavorable—merely expectant and judicial, and, on the whole, fair, impartial, and reasonably con-

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You would listen *now*!

The Dictograph System of Interior Telephones will not only save you \$123.00 on every two thousand dollar salary you're paying, but will save you a like percentage on *every* salary. On a \$3,000.00 a year salary, it saves you \$189.00; on a \$25,000.00 a year salary, the saving figures \$1,560.00!

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The saving is not a theory. It has been figured out in actual dollars and cents.

Your \$2,000.00 a year clerk receives 41

cents for every thirty minutes of his time—your \$25,000.00 man gets \$5.20 for every thirty minutes.

Saves \$1,560, Annually!

So if your \$2,000.00 clerk spends *only* 30 minutes of each day going from one department to another for information—it amounts to \$123.00 a year. And if the \$25,000.00 man loses just 30 minutes of his time waiting for messengers or inside telephone calls, it amounts to \$1,560.00 a year.

With the Dictograph System the Executive has absolute control. There's no waiting; no operator; no busy wire; no earpiece; no mouthpiece. You sit at your desk, throw a key and *talk*. That's all there is to it.

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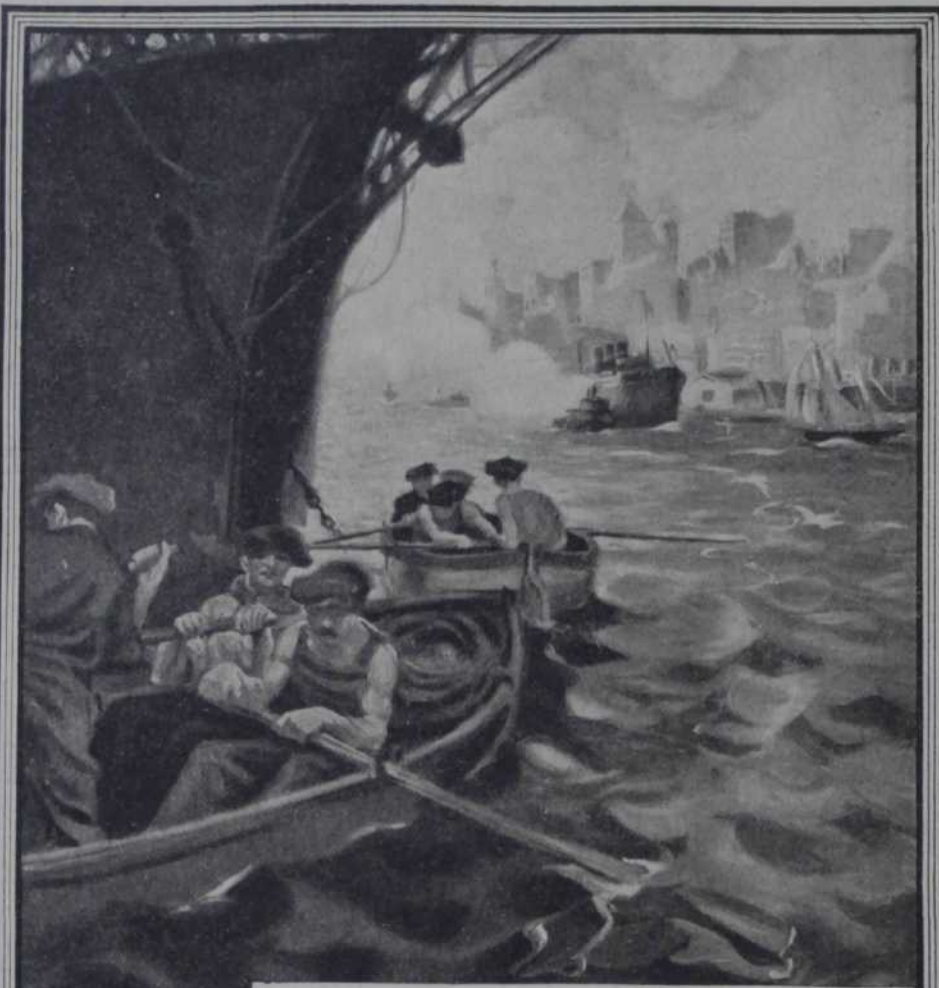
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Supercargo—or Banks?

IN olden days, ships left home ports laden with merchandise in charge of a supercargo, or agent, who traded in each port, selling his wares and buying return cargoes—all for cash of the realm.

Today, through the medium of international commercial banks, foreign trade is conducted by an orderly process, comparable to that of domestic commerce, and employing neither supercargo nor actual cash.

The National Bank of Commerce in New York is associated with leading banks throughout the world, and serves as the medium for direct relations between merchants and manufacturers of this country and those in foreign markets.



National Bank of Commerce in New York

Capital, Surplus and Undivided Profits
Over Fifty Million Dollars

siderate. What happens in the next four or five months will do much to determine the opinion of the many on any further rate increases and on the issuance of more railroad securities. Just now the immediate and pressing demand is for better service.

On the surface, labor troubles are somewhat less in evidence, but it is perfectly obvious that this is not a true index of the situation. It is especially significant that the younger generation at work are all at sea as to reliability, dependency, obedience, discipline and interest in their jobs. While these things have been more or less true of youth at all times, they are accentuated at present in a startling manner. Some of the signs of decline in any nation are softening of fiber, both mental and physical, and indulgence rather than restraint. They are all natural legacies of the war, and human history has experienced them in the past. So the real question is as to whether they are mere passing phases in our experience, or else preludes to something much more serious.

There are many remedies proposed, but they are futile and inadequate as they come largely from theorists and reactionaries, and mean merely a return to the ways of the past, which were utterly unable to prevent the present emergency, and can, therefore, offer small hopes of remedying it. It is a world-wide problem, and may signify the working of that little leaven which is leavening the whole mass, and may portend a different existence from that we have known before.

Few phases of the present situation are of greater moment than the wide-spread interest of the business world in education and in the human products of education. This interest seeks, however, rationality and practicalities rather than abstract thought. For we are fed up on the prophecies and panaceas of theorists, all taken from classical books on economics, and which have as much relevancy and application to present emergencies as a theorem in Differential Calculus. One salient example is that fantastic foolery that the way to bring down prices in this country is arbitrarily to reduce the volume of currency in circulation.

The general business thought trends to a combined relation of study and experience and that economics, being the science of business, shall be taught as a practical thing of the day and not as a tradition from the past as though it were an abstract science after the fashion of pure mathematics. Also that there be no attempt to give a technical business training, save in vocational work, to that large and growing number of students in colleges and universities who seek preparation for a business career. But rather a broad and liberal education in the vital matters of the day, and in the essentials of the past, so that the student shall come forth equipped with a trained mind, capable of analyzing the business problems presented to him and with discerning vision to perceive their possibilities.

Britain's Oil Business

THE principal exports of oil products to Great Britain in 1919 were 71,674,064 gallons of gasoline, 166,630,047 gallons of kerosene, 69,889,334 gallons of lubricating oil and 197,278,894 gallons of fuel oil. This is a decrease of approximately 50,000,000 gallons of gasoline, 45,000,000 gallons of lubricating oil and 516,000,000 gallons of fuel oil, compared with 1918. The only oil product to show an increase was kerosene, the gain over the previous year being 3,100,000 gallons.



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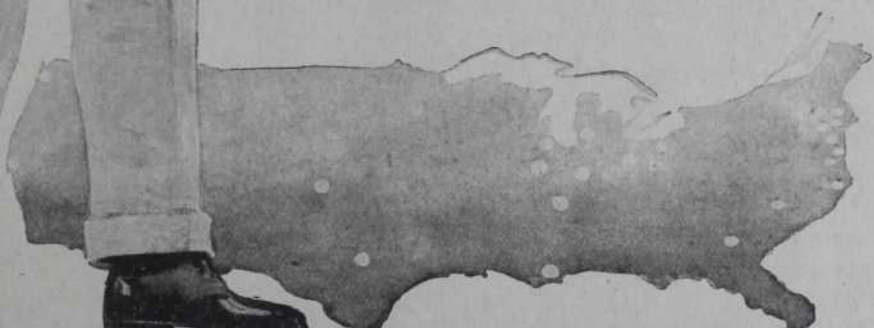
Twenty-two thoroughly competent Globe units are now maintained in a like number of cities throughout the country.

Regardless of where your plant is located, you have Globe neighbors who will take care of your piping problems.

All you have to do is telephone to the nearest Globe office.

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BRANCH OFFICES: Atlanta; Baltimore; Birmingham; Boston; Charlotte-N. C.; Chicago; Cincinnati; Cleveland; Dallas; Grand Rapids; Indianapolis; Memphis; Minneapolis; Newark; New Orleans; New York; Omaha; Richmond; Springfield, Mass.; Syracuse; St. Louis.



The Log of Organized Business

ABOUT one hundred American delegates are expected to attend the organization meeting of the New International Chamber of Commerce, at Paris, the week of June 21, 1920. Invitations have been sent out by the American group of the International Organization Committee to business and industrial associations, asking them to name delegates to participate in the formal organization meeting.

The International Organization Committee, which was provided for at the International Trade Conference at Atlantic City last October, is to meet at Paris in advance of the general organization meeting, to prepare and report a plan of permanent organization, the basis of which was drafted and approved at the International Trade Conference. Plans will be presented by the Organization Committee for a strong and active International Chamber, permanent international headquarters will be selected, officers will be elected and the work of the Chamber will actually begin.

Aside from the fact that the International Chamber is to be formally launched, the Paris meeting will assume considerable importance in view of the disturbed conditions in international trade brought about by the exchange situation. This vital question of international credit, as well as shipping, tariff regulations, unfair competition in international trade, and other problems of equal importance affecting stability in world-wide commerce and production, will be discussed.

American members of the Organization Committee whose names are now announced are:

A. C. Bedford, chairman of the Board of the Standard Oil Company, and member of the National Foreign Trade Council, New York, chairman.

Thomas W. Lamont, of J. P. Morgan & Company, New York City.

Edward A. Filene, president, William Filene's Sons Co., Boston.

Richard S. Hawes, president of the American Bankers' Association, St. Louis.

John H. Fahy, of Boston, formerly president of the Chamber of Commerce of the United States.

S. C. Mead, secretary of the Merchants' Association of New York, vice-chairman and secretary.

The foreign members of the committee, as just cabled to this country, are as follows:

Belgium

Louis Canon-Logrand, chairman; president, Chamber of Commerce, Consulting Engineer, Mons, Belgium.

Prof. Paul Van den Ven, University of Louvain, Delegate of Belgian Minister of Finance at Paris, Brussels, Belgium.

Alexander Le Groote, vice-president, Antwerp Chamber of Commerce, Antwerp, Belgium.

Two additional members of this committee will be named by the Central Committee of Industry of Belgium.

France

M. Eugene Schneider, chairman; head of Creusot Steel Works; president, British Iron and Steel Institute; former Member of Chamber of Deputies, Paris, France.

M. Tirman, Counselor of State, Paris, France.

M. Roche, Delegate of General Syndicate of Chemical Products, and Administrator Delegate of the firm of Poulenc Brothers, Paris, France.

Great Britain

Lord Desborough, chairman; president, British Imperial Council of Commerce, and formerly president, London Chamber of Commerce, London, England.

Sir Arthur Shirely Benn, K.B.E., M.P., managing director, Hunter, Benn and Company, London, England.

Edward Manville, president, Association of British Chambers of Commerce; vice-president, Federation of British Industries, Coventry, England.

Stanley Machin, president, London Chamber of Commerce, London, England.

One member of the committee will be named to represent the banking interests of Great Britain.

H. B. Dunwoody, secretary; Association of British Chambers of Commerce, London, England.

Italy

Comm. Ferdinando Quartieri, chairman; president of the Italian Corporation for Chemical Industries, Milan, Italy.

In spite of fogs and squalls, the good ship forges right along, thank you, and there are events aloft and below that are eminently worthy to be recorded

Comm. Prof. Vittorio Meneghelli, president, Chamber of Commerce of Venice, Italy.

Comm. Giorgio Mylius, president of the Italian Master Cotton Spinners' and Weavers' Association, Milan, Italy.

Comm. Pietro Giovanni Lazzarini, Lazzarini Brothers, Shipping, Carrara, Italy.

Comm. Augusto Jaccarino, Banco di Napoli, Rome, Italy.

The International Chamber succeeds the old International Congress of Chambers of Commerce, which ceased to function with the outbreak of the World War in 1914.

The specific aims of the organization as outlined by the Committee on Organization are:

To create a permanent international headquarters to centralize all data concerning economic subjects and social conditions; the facts relating to the respective needs, present production and future possibilities of each country.

To act as an instrument of coordination which will suggest trade regulations and legislative measures to facilitate and encourage the development of economic commerce.

To inform public opinion through the publication of facts with regard to business conditions and through the dissemination of views of technical experts and business men.

To put at the disposal of all official organizations the reports and conclusions prepared by these experts and business men.

The Committee on Permanent Organization of the International Trade Conference agreed tentatively that the constitution of the new Chamber should provide, among other things, for:

A board of directors composed of two members selected by each nation.

An international headquarters, with one representative of each nation attached to it, assisted by technical experts, all to be under direction of a general secretary.

A corresponding bureau in each country.

Membership to consist of chambers of commerce, commercial organizations, banking and similar associations, firms, corporations and individuals, holding associate but not voting membership.

Meetings of the membership every two years.

A system of referenda to be issued during the interval between the biannual meetings of the members.

Other objects of the association are:

To make import and export trade easier.

To remove international friction, much of which begins with commercial differences.

To safeguard international trade against waste and fraud.

To increase the total production of the world, and make the product available to the people of the world.

To standardize international documents, practices and laws affecting commercial intercourse.

To increase mutual profitability of international transactions.

To cultivate personal acquaintanceship among business men and bankers of the differ-

ent nations of the world, and thus lessen international prejudices and misunderstandings.

At the first meeting in June only the five countries participating in the International Trade Conference, the United States, Belgium, Great Britain, France and Italy, will be represented. Later business organizations in the other principal countries of the world will be taken into membership.

For the National Defense

IN its report to the National Chamber of Commerce, the Committee on National Defense, after making an exhaustive study of the future military policy of the country, urged the establishment of the office of Secretary of National Defense, who should concern himself with the broad questions involved in the national defense problem. Such an officer would have no administrative duties but would be the point of contact between the President and the War and Navy Departments, as well as the Department of the Air, if such a department is set up. The committee requests authority from the National Chamber to support such a plan.

New Department Proposed

THE MEMBER organizations of the National Chamber of Commerce have been asked to vote upon the question of whether or not the federal government should establish a Department of Public Works. Upon the outcome of the referendum will depend the policy of the National Chamber on this question when it comes up in Congress.

The committee appointed by the National Chamber to make a thorough study of this subject recommended that the referendum be taken on the following propositions:

1. Shall there be established by the national government a Department of Public Works?

2. Shall such department be established by a suitable modification of the existing Department of Interior, excluding therefrom the nonrelated bureaus or offices and by the change of name of the Department of Interior to the Department of Public Works?

3. Shall such department be established by the creation of an entirely new department?


The desirability of a federal Department of Public Works was suggested by the Engineering Council, a member organization of the National Chamber. The Engineering Council is of the opinion that there is a great need for such a department to take charge of governmental work of an engineering and construction character.

Building Fund Grows

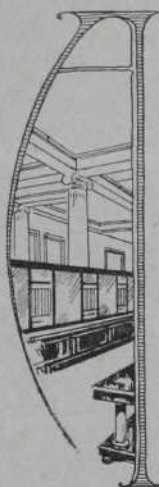
APPROXIMATELY one-half of the \$2,750,000 building fund of the Chamber of Commerce of the United States had been underwritten on April 1, according to Harry A. Wheeler, of Chicago, chairman of the Building Fund Committee. This amount did not include sums expected from New York, Chicago, Boston, Detroit, St. Louis and Indianapolis.

To Save the Sunlight

A PUBLIC VOTE taken by the Minneapolis Civic and Commerce Association on the question of a return of daylight saving shows that the people of a city are



Your Bank and its P.A.X.



AMERICA'S greatest and most progressive banks are rapidly installing the Automatic Electric Services of the P.A.X. (Private Automatic Exchange) because it enables any bank to give you as a client the quick, courteous, accurate—and above all, confidential—service which you require.

The Federal Reserve Banks of New York City and of Richmond; The Continental and Commercial Bank of Chicago; The Third National Bank of Toledo; The Equitable Trust Company, New York; The Chemical National Bank, New York; The Mellon National Bank, Pittsburgh, Pa.; The Title Guaranty & Trust Co., Tulsa, Okla.; and the Fifth Third National Bank, Cincinnati, are a few such establishments already equipped with the P.A.X.

The Automatic Telephones of the P.A.X. give prompt, accurate, and above all secret, interior communication service.

The Code Call of the P.A.X. locates instantly officials and department heads wanted for emergency or routine matters.

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The Conference Wire enables several officials to confer via wire on any special matters which may arise, promptly and without leaving their desks.

These, and many other related and co-ordinated services, are supplied by the P.A.X. over a single pair of wires—all operated and controlled by a simple dial.

Not only in banks, but in thousands of America's leading industrial and commercial organizations engaged in every form of business, the Automatic Electric Services of the P.A.X. are helping vitally to speed production and cut down costs.

The value of the P.A.X. to your organization will be proved by investigation. A booklet, giving further details, will be gladly sent on responsible request.

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Among thousands of American industries this dial has become the symbol of perfected organization. It controls all the automatic electric services of the P.A.X.—paging, fire alarm and watchmen service, conference and interior telephone calling.



N. B.

In the list of subscribers to the "Sperry" Service of co-operative discount you'll find the firm name of Rothschild & Co., Chicago, Ill.

In Rothschild & Co. you'll find a highly efficient, modernized department store with a floor space of about 572,000 square feet, employing some 3,000 people, which has been serving Chicago folk for a quarter of a century.

In the "Sperry" Service, which they adopted sixteen years ago, this concern finds a tried and true plan—a thoroughly sound and practical plan for paying its customers a discount in appreciation of their continuous cash patronage.

In featuring this establishment in these columns we present the first of a series of similar announcements aimed to acquaint anyone in any way connected with present-day merchandising with the true value of the "Sperry" Service; its power to build business and good will for concerns of national prominence and encourage genuine Thrift in the American home.

In New York City you'll find

THE SPERRY & HUTCHINSON CO.

AT
114 FIFTH AVE.

ready to express themselves on matters in which they are concerned if given an opportunity. Arrangements were made for a vote among employees of shops, offices and factories, but such a demand for a vote came from housewives that it was decided to conduct a public poll through the newspapers.

The total vote cast was 62,990, of which 35,249 were for daylight saving.

Women in British Industry

THE American Chamber of Commerce in London calls attention to the action of the British Labor Ministry recognizing the need of extending assistance to women who entered Britain's industries through causes having root in the war. The growing number of women in competitive fields of labor in the United States and Britain is significant, and the steps taken in either country to grapple with the problem are being closely studied. A reliable estimate received by the American Chamber placed the number of women now working, or seeking work, in Great Britain at a million more than in pre-war days.

Anchorage for Dirigibles

THE American Chamber of Commerce in London reports that the steel towers now in course of construction at the Barrow works of Messrs. Vickers will enable airships moored to them to be supplied with fuel, water, gas and goods, while the crew and passengers will also go aboard from the tower. The American Chamber says that, when completed, the construction will be about 150 feet high and will consist of steel lattice work. The Vickers design is furnished with a revolving head, to which the airship will be closely moored, bow on, and float clear of the ground.

Alcohol from Coal

ACCORDING to the Chamber of Commerce in London, a new method for the extraction of coke oven gas and its conversion into alcohol is being conducted in certain iron and steel works in Great Britain. Research work shows a yield of 1.8 gallons of alcohol per ton of coal carbonized. Assuming this method to be applied with success to, say, 14,600,000 tons of coal carbonized in by-product ovens in England, a total yield of about 20,000,000 gallons of alcohol would be produced.

Trade Council Convention

J. A. FARRELL, chairman of the National Foreign Trade Council, has issued a call for the Seventh National Foreign Trade Convention at San Francisco, May 12-15. In his convention call, Mr. Farrell pointed out that liquidation of balance of trade in favor of this country must be accomplished by investments in Europe and purchases of raw materials abroad.

Polish-American Chamber

A NATION-WIDE campaign is being waged to obtain 2,000 members for the newly organized Polish-American Chamber of Commerce of the United States, just recently granted a charter. Field representatives are making a tour of the United States to interest persons who want commerce between the two nations more greatly developed. It is estimated that there are more than 4,000,000 Polish-American citizens in the United States.

The Factories of San Francisco

THE San Francisco Chamber of Commerce has just compiled the first complete directory of manufacturers ever published in that city. It shows that there are approxi-

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CO-ORDINATION

TEMPERATURE control is a daily problem. Every industry, without exception, faces it. Every manufacturer knows it; every engineer recognizes it; every mechanic contends with it.

Without adequate temperature control, manufacturing would be slipshod. Haphazard methods would prevail, only to handicap production. Efficiency would be reduced, undermined. And industrial progress would be non-existent.

Tycos Temperature Instruments are linked with the machinery of all industry to provide scientifically exact temperature control. And these master-built instruments help to build the products of every go-ahead nation.

There are Tycos Temperature Instruments that will specifically meet your needs. Tell us your problems, particularly those that perplex you most.

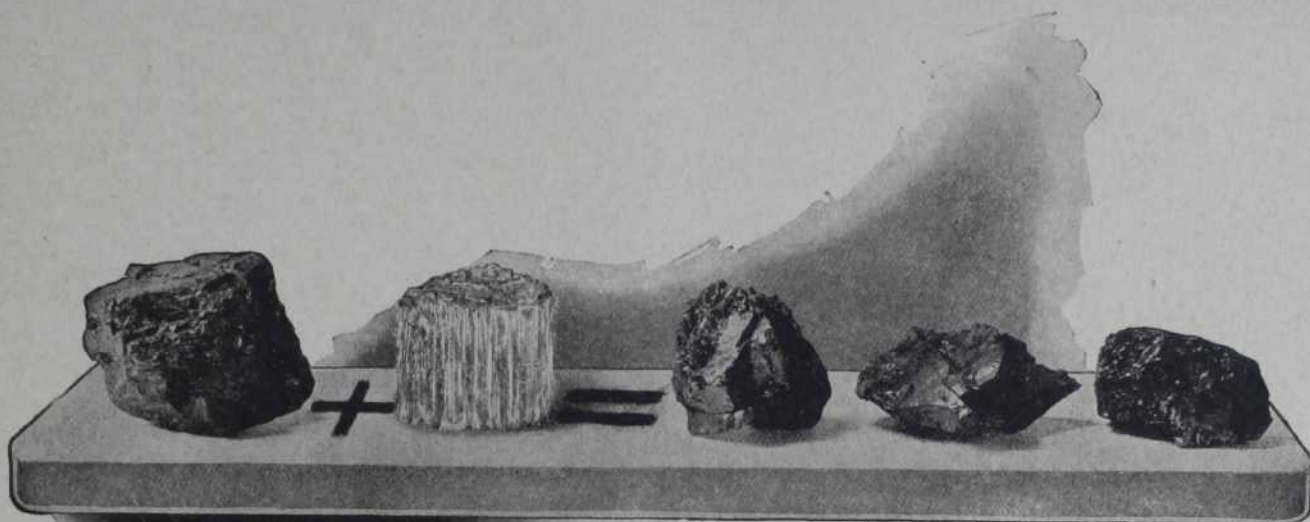
Tycos products include:

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Taylor Instrument Companies
ROCHESTER, N.Y.

There's a Tycos or Taylor Thermometer for Every Purpose



The proof that one plus one is more than two

IF every addition to the power output of America's industries called for a corresponding increase in fuel consumption, our boasted industrial progress would be a mammoth conceit.

A plant that can double its output only by doubling its fuel consumption adds far less than it should to the general wealth or to the bigger interests of those it serves.

Each year engineering contributes new devices, new methods and new knowledge that add to the great total of all technical knowledge and so tends to overcome the apparent necessity of applying twice the cause to get twice the effect.

Plants no longer need to double their coal bill to get twice the power. Roughly they less than double it and get twice the result, or they double the input and get better than twice the output—not by burning more fuel wastefully, but by cutting fuel losses through insulation knowledge and materials.

Johns-Manville Asbestos in its wide usage in heat insulation has become a great ally to fuel, in accomplishing this. Nor does its use stop there, for in various combinations

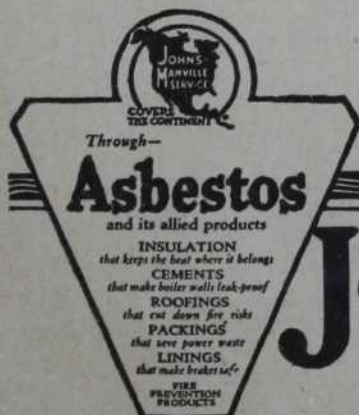
with allied materials it furthers plant efficiency, in packings that prevent leakage and prevent friction and again in high-heat cements so necessary to boiler furnace operation. More and more as knowledge gains, Asbestos becomes the bodyguard of fuel through products like these:

Asbestos and 85% magnesia insulations for steam and hot water piping; Aertite Boiler Wall Coating for boiler wall exteriors; High Temperature (Refractory) Cements for boiler settings; Asbestos Sheets and Blocks for insulating hot surfaces; Insulating Cements; Monolithic Boiler Baffle Walls—tight, durable, easy to install—prevent short-circuiting of hot gases; Sea Ring Packing—eliminates unnecessary friction between rod or plunger and packing.

H. W. JOHNS-MANVILLE CO., New York City

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Serves in Conservation

"Human Interest" Scenarios

The ordinary industrial motion picture lacks human interest.

We knew that scenario writers who were masters of the much mouthed, little-used "human interest" element were scarce—but we knew Mr. Lyne S. Metcalfe, who was a

Sunday Editor of the Chicago Tribune

for some years, when advertising men were watching its phenomenal circulation growth.

We are pleased to announce that keen, trained journalistic instinct with extraordinary motion picture experience

Will Now Edit All Scenarios of the Bray Studios

We knew Mr. Metcalfe as film editor of the Keeley-Handy Syndicate, and later as editor of the only industrial motion picture trade paper—The Moving Picture Age—a position that gave him a comprehensive view of the activities of the whole industry.

We knew that his mail came from all over the world—from every sort of organization,—social, religious, educational, civic, business, etc.,—from people who wanted picture and equipment, and producers and manufacturers who make them. Mr. Metcalfe's exceptional training is typical of the experience and training of the experts on the Bray Studios staff.

"See Bray First"

The BRAY STUDIOS are the oldest, largest and most experienced producers in America,—Originators and patentees of the animated cartoon process, and of the Animated Technical drawing,—producers of the internationally known Bray Pictograph. Our representatives call only by appointment.

THE BRAY PICTURES CORPORATION

23 East 26th Street
New York City

208 S. LaSalle Street
Chicago, Ill.

mately 2,400 manufacturers located in San Francisco, producing 1,300 commodities. The directory is a record of extraordinary achievement of business, showing the enormous variety of goods that can be turned out by a single community. It will have a good effect in advertising the city. Not only will every Chamber of Commerce in the United States be supplied with this index to the resources of San Francisco, but every American consul, consular agent and trade representative abroad will be mailed a copy.

To Cooperate with Chamber

THE Rice Association of California has voted to operate as a subordinate body of the San Francisco Chamber of Commerce. The name and purpose of this organization will continue the same as heretofore, but this association now becomes a part of the Chamber organization on the same basis as the Grain Trade Association and the Green Coffee Association.

"Pointers" for Fall River

ABOUT two hundred signs will be placed on the main roads leading to Fall River, Mass., through the work of the Road Posting Committee of the Member's Forum of the Chamber of Commerce. The signs will be arrow-shaped, a yard long, and will bear in black letters on a white background the words "Fall River—Chamber of Commerce." The signs will be placed at puzzling forks and corners on the roads leading to Fall River from Boston, Newport, Worcester via Providence, New Bedford and Cape Cod.

Industrial Peacemaking

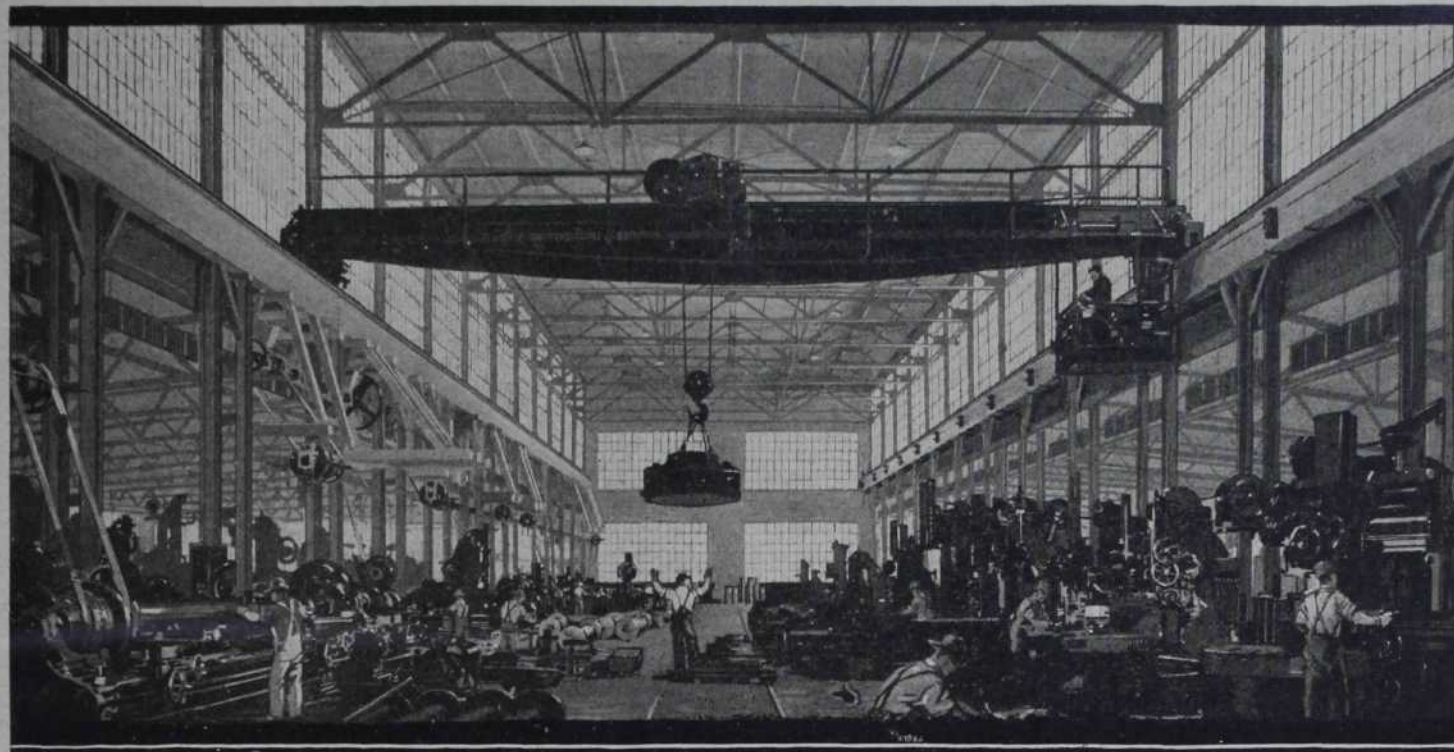
A REFERENDUM on labor questions, taken by the Fall River, Mass., Chamber of Commerce, proved conclusively that the members favored the Chamber's entry into the field of industrial relations to the extent that it should use its good offices in helping to settle strained labor situations. Practically every ballot returned gave affirmative votes on the three industrial questions considered.

The first question was whether the interest of the community should be regarded as above the interest of any individual or group. The second question asked whether it should be regarded as the Chamber's duty to extend its good offices or to take the initiative in an industrial situation, when such action appears necessary for the public welfare. The third question had to do with the desirability of the Chamber interesting itself in plans to avoid industrial dispute and supporting propositions tending to develop the spirit of accord between employers and employees.

Zoning White Plains

HERBERT S. SWAN, who is zoning White Plains, N. Y., under the direction of the City Planning Commission, has practically completed his maps showing the manner in which every parcel of ground in the city is being utilized. From this data the future use of every section or zone will be determined after consultation with the property owners. This is considered to be one of the most important steps ever taken toward regulating the development of White Plains.

The Housing Corporation of the city has taken over a parcel of thirty plots in Anderson Park, as the location for the first group of its new houses. Beverly S. King has been engaged as architect and Maurice Huerstel as building contractor. They are members of the local Chamber of Commerce.



Less Building Time—More Earning Time

"The mill will never grind with the water that has passed."

If you build a factory in four months which could have been built in half that time, two months of building time—production time—wealth producing time, has been lost forever.

Speed in building construction is an economic factor in industry. Time saved in Austin operations has invariably meant increased production for the owner. Less building time gives more earning time.

How has Austin set this building pace?

First Austin engineers have standardized the plans and construction operations as far as is found practical.

All essential materials have been purchased in quantity, at advantageous times and have then been stocked at strategic points for quick delivery.

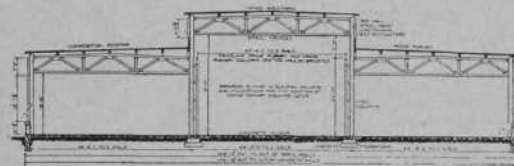
With materials methodically assembled, plans standardized and all building operations co-ordinated, it is no wonder that Austin construction forces can make such unusual progress. It is no wonder that production operations can be begun months ahead of the usual time.

But Austin speed is not limited to standard buildings. Special structures of every type can be speedily built by the Austin method.

If your need is urgent use the wires. Send for an Austin Book of Buildings.

THE AUSTIN COMPANY

Industrial Engineers and Builders, Cleveland, Ohio



Cross-section Austin No. 10 Standard. Width 150 ft.
Length, any multiple of 20 ft.



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PITTSBURGH	- - - - -	493 Union Arcade, Grant 6071
DETROIT	- - - - -	1452 Penobscot Bldg., Cherry 4466
CHICAGO	- - - - -	1374 Continental Com'l Bank Bldg., Wabash 5801
SAN FRANCISCO	- - - - -	936 Pacific Bldg., Sutter 5406
DALLAS	- - - - -	627 Linz Bldg., X-5914

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AUSTIN

STANDARD FACTORY-BUILDINGS



HOW THE MID-WEST IS HELPING THE WORLD

The Mid-Western Empire of Production, whose center and business capital is Chicago, is the greatest grain market of the world. It has the *cattle, hogs and sheep* to supply meat to America and a large part of the world besides. Vast supplies of *ores*, easily accessible and the *fuels* to smelt them are here. Colossal *iron and steel and cement* plants pour out of the district millions of tons of structural materials. *Timber* grown here is converted here by huge mills into billions of feet of *lumber*. *Furniture, clothing and all other household and personal necessities* are produced here and exported in enormous quantities.

Banking facilities for financing the production and distribution of these products to the ends of the earth are *here in Chicago!*

Our business banking service, foreign and domestic, has kept pace with the ever increasing productive activity of the Great Mid-West.

The CONTINENTAL and COMMERCIAL BANKS

CHICAGO

RESOURCES MORE THAN 500 MILLION DOLLARS

Branch Library for Chamber

THE Pittsburgh Chamber of Commerce announces that a branch of the Carnegie Library will be opened in the Chamber's headquarters, that city. Through arrangements with Director John H. Leete, of the Carnegie Library, a collection of about 1,000 volumes of standard books will be placed on the shelves in the Chamber, and a trained librarian will be in charge. The complete catalogs of the library will be on file at the Chamber, and this will give the members the advantages of the circulating department. Calls for books at the Chamber branch will be delivered the following day by automobile.

Farm Bureau for Chicago

CHICAGO will be the headquarters for the American Farm Bureau Federation. This organization consists of twenty-eight state farm bureau federations. These federations are, in turn, federations of county farm bureaus. The total membership of the American Association is 700,000.

Western Business Trip

THE Interstate and Foreign Trade Committee of the Chicago Association of Commerce has definitely decided on a business tour to California through Texas and the southwest, returning through Portland, Seattle, Tacoma and the northwest tier of states. The trip will be made in a special train, the equipment of which will consist of six or more cars with club car, dining car, sleepers and observation. The date of the trip will be from May 1 to 22, with a four-day stop at San Francisco to attend the National Foreign Trade Council convention. The number of delegates will be limited to fifty.

Roads and the Weather

THE establishment of daily reports on road conditions in Colorado by the United States Weather Bureau, at Denver, Colo., is a probability of the near future as a result of action taken by the Civic and Commercial Association of that city. When instituted, the service will be similar to that now being furnished in New England and the middle west. "Highway Weather Service" cards telling the conditions of the main roads in various districts will be distributed daily. These will also carry the weather forecasts. Road conditions will be described as "fine," "good," "fair but rough in spots," and "rough."

For Research in Shipping

TO collect and serve the merchant marine shipping interests of the country with detailed and dependable information upon every phase of the shipping business, a Maritime Research Bureau is to be established at San Francisco. The Chamber of Commerce of that city is behind the movement, and the members have been pulling for the establishment of the bureau, which will be similar in purpose and scope to the activities of the Bureau of Railway Economics, which for several years has been maintained at Washington by the railroads of the country. It is proposed to establish a bureau at San Francisco and later to cause the establishment of similar bureaus in other important shipping centers of the United States. Finally, it is planned to set up a national service at Washington.

Lockport Spends a Million

THE Board of Directors of the Lockport Homes Company is hard at work grappling with the problem of building a million dollars'

Westinghouse

ELECTRICAL APPARATUS FOR EVERY PURPOSE



Westinghouse-Equipped Electric Ovens are used at the plant of the Packard Motor Car Company, Detroit, for baking enameled metal parts.



Getting Better Heat without Fire

Follow the growth of the motor-car industry, and you'll find that methods, processes and machines have again and again been revolutionized by a single force—Electricity.

Today the span of improvement has widened to include an application of current as great as light and power—commercial electric heat.

Through this heat the motor-car manufacturer finds the most satisfactory solution to his problem of enameling metal parts.

Through the use of electric heat he

can be sure of an even temperature that bakes the enamel from the bottom, leaving it dense and free from blowholes.

Moreover, he minimizes fire risk and greatly reduces the time required for proper baking of enamel.

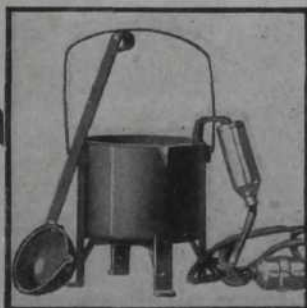
Electric heat is used today for a variety of commercial purposes in many branches of industry, but always retains its fundamental advantages of evenness, ease of regulation, cleanliness and safety.

The wide experience of Westinghouse industrial heating engineers is placed freely at your disposal.

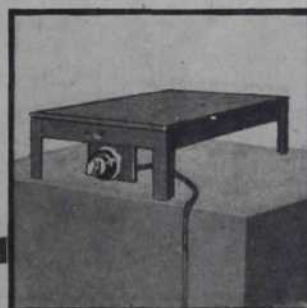
WESTINGHOUSE ELEC. & MANUFACTURING CO.
East Pittsburgh, Pa.



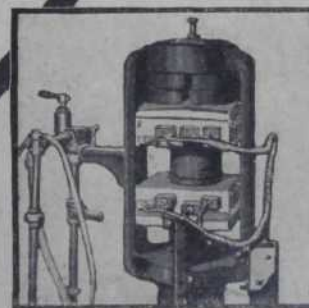
Electric Glue Pot keeps glue at proper heat



Electric Solder Pot combines safety with convenience



Hot Table used in making celluloid articles



Press for forming hot-molded compounds

ALL OVER the WORLD

the quest for Petroleum goes on constantly and "Oilwell" Machinery is conducting this search.

Test Well for Oil in England



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When the British Government decided to make an official test for Petroleum in England, "Oilwell" Experience was called upon to furnish the drilling equipment.

We are Specialists in

Oil and Gas Well Supplies

and our experience in manufacturing supplies for the oil country dates back to the drilling of the First Oil Well in America in 1859.

If it is for
the
oil country
we
make it



Any Size
Any Depth
Anywhere

Oil Well Supply Co.

Main Offices:

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New York Los Angeles San Francisco
Tampico London

worth of houses in Lockport, New York. The board is meeting housing experts from all parts of the country, most of whom have had experience in the government war housing propositions. Already three of its meetings have extended throughout the entire afternoon. The task committed to this body of men is a big one and means much to the development of Lockport.

Erie's "Blue Sky" Investigations

ERIE, Pennsylvania, has come in for a lot of free publicity lately as a result of the announcement some time ago of the plan inaugurated by the Board of Commerce of that city to investigate schemes and propositions for the sale of stocks or other securities in that community. The secretary of the board has received many letters from various parts of the country asking for information as to the scheme to be followed in investigating stock sales and commending the stand taken by the board in its endeavor to protect the people of Erie from losses caused by investment in questionable or unprofitable projects.

Poll of Industry

THE Americanization Committee of the Chamber of Commerce, of Wheeling, W. Va., is taking a poll of industries in that community to find out how many aliens are employed. Questionnaires were sent out to all the industries, and when these are returned it is believed that they will show about 3,000 aliens employed in industry in Wheeling and vicinity.

To Group Merchants

CHAIRMAN JACOBS, of the Retail Merchants Bureau, of New Orleans, has hit upon a plan to broaden the scope of the bureau and to attract a more general representation of local merchants by creating divisions within the bureau for jewelers, shoe dealers, haberdashers, men's clothiers, milliners and other lines. Grouping is also to be made according to streets. This plan has been put into effect elsewhere and found effective.

Waterway Appropriation Cut

KANSAS CITY resents the action of Congress in cutting the appropriation for improvement of inland waterways from \$40,000,000, as recommended by the Board of United States Engineers, to the amount of \$12,000,000. The proportion of this sum which would be available for the improvement of the channel from the Missouri would be \$600,000, a ridiculous sum for this project, according to Kansas City business men interested in this project. Kansas City put a number of boats on the Missouri River in consideration of Congress promising to make proper appropriation so that the improvement of the channel could be made.

Training a City as It Should Go

THE Association of Commerce, of Madison, Wis., is supporting the movement to establish a city planning commission in Madison. Its effort in this direction was recently supported by the Common Council of that city, which went on record as favoring the state law, relating to the creation of a city planning commission in the various cities of Wisconsin. Under the provisions of this law, the personnel of the commission will be made up of the mayor, city engineer, president of the Madison Park and Pleasure Drive Association, one councilman and three citizens to be appointed by the mayor.

Causes and Antidote for Industrial Unrest

Will Agricultural Prices Fall?

Railway Valuation as a Working Tool.

The Illinois Blue Sky Law

Appear in recent numbers of

THE JOURNAL OF POLITICAL ECONOMY

A Magazine for Executives
and Business Libraries

\$3.00 per year

BOOKS TO READ

Readings in Industrial Society

By L. C. MARSHALL

A summary of modern industrial society from historic and functional points of view. \$3.50, postpaid \$3.75.

Principles in Money and Banking

By H. G. MOULTON

A survey of the fundamental principles of currency and the organization of the commercial banking system. \$3.00, postpaid \$3.25.

Current Economic Problems

By W. H. HAMILTON

Revised edition presenting current material on modern economic problems. Just published. \$3.50, postpaid \$3.75.

Unfair Competition

By W. H. S. STEVENS

The author, a member of the Federal Trade Commission, examines twelve methods of competition selected from the practice of modern corporations and trusts, and discusses an economic standard for judging their fairness under present legislation. \$1.50, postpaid \$1.65.

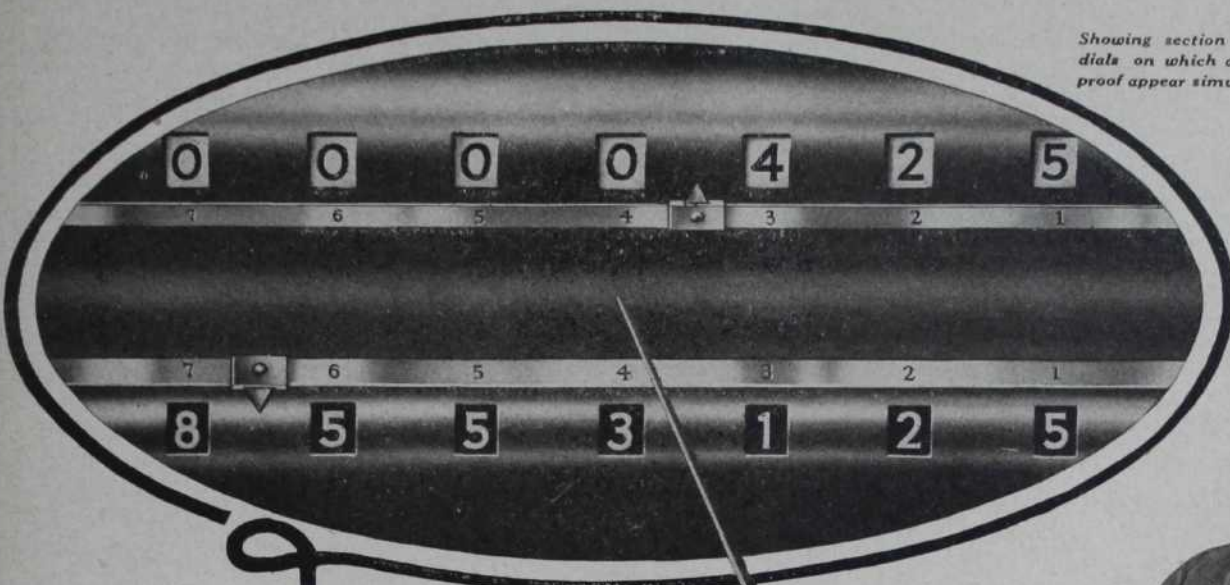
FOR COMMERCIAL STATISTICS

Goode's Outline Maps. The most forceful method of presenting sales and market statistics graphically is by the use of an outline map. Maps of the world, the continents, and each of the important countries are furnished in several sizes.

Write for descriptive material

THE UNIVERSITY OF CHICAGO PRESS
5824 Ellis Avenue Chicago, Illinois

Showing section of Monroe
dials on which answer and
proof appear simultaneously



In Multiplication—
Multiplier appears in upper dial;
Multiplicand on keyboard;
Answer in the lower dial;
—the three factors of problem
are always before you.



"You Don't Have to Figure It Again"

A CERTAIN business executive decided he was ready to choose between two calculating machines—the Monroe and one other.

"We need five calculating machines in our office here," he said to the machine representatives. "I know the claims for your respective machines, but I can't decide which is the better. So I want to put you to a test. I will give you a problem to figure. Whoever gets the answer first and proves it to be dependably accurate, gets my order. Ready? Then multiply 20.125 by .425."

"Finished!" said the Monroe man.

"You're first on speed," said the executive to the Monroe man. "But," he continued, "how do you fellows know your answer is right? I suppose you have to figure it over again to be absolutely sure?"

"Not on this machine," replied the Monroe man. "I *know* my answer is right; here's the proof of it. There's my Multiplicand in the keyboard, 20.125; there's my Multiplier, .425, in the upper dial and there's my Answer, 8.553125, in the lower dial—all three factors prove my work is correct.

"You don't have to figure it over again if you have a Monroe."

The Monroe's speed, accuracy and simplicity of operation (no trained operators required) adapt it for use on every kind of figure-work—figuring costs, checking invoices, figuring interest, discount and payrolls, etc. The Monroe is the only machine on which you can multiply or add by a forward turn of the crank; divide or subtract by a backward turn of the crank. Mail coupon for more complete information, contained in "BOOK OF FACTS."

MONROE

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Calculating Machine

Monroe Calculating Machine Co.
Woolworth Building, New York
Offices in Principal Cities

The "SHOW ME" Coupon—Mail it today

Monroe Calculating Machine Co., Woolworth Building, New York

Without obligation to us, please send your "Book of Facts", showing how the Monroe will save time in the figure-work of our business

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Says the

Hupp Motor Car Corp.:

"We find the Monroe Calculating Machine especially valuable in our pro-rating, statistical reports, pay-roll extension, cost analysis, etc. Its self-checking facilities are especially valuable to us. We consider it one of the most efficient office machines and would not consider ourselves properly equipped without one."





When it Comes to Real Facts

THEORIZING is so.netimes a profitable, often an idle pastime. When it comes to real facts, however, past performance is the acid test which alone proves unfailing.

Stromberg Job Time Recorders are being used in practically every industry in this country and are applied to hundreds of varied conditions with always the same concrete benefits to both employer and employee. Is this not an assurance of the advantages which you too will secure through their use?

We manufacture complete Time System Apparatus: Master Clocks, Employees' In-and-Out Recorders, Job Time Recorders for Cost Keeping, Time Stamps, Program Instruments, Secondary Wall Clocks, etc.

May we send you, without obligation, our booklet No. GN, telling about Stromberg Employees' Recorders, Cost Recorders, etc.? A postal will bring it.

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600 S. MICHIGAN AVENUE

CHICAGO, ILLINOIS

*Canada: Stromberg Time Recorder Company of Canada, Ltd.
72 Queen St., W., Toronto, Ontario, Canada*



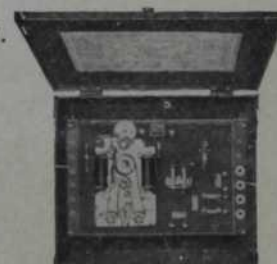
Secondary Clock



Time Stamp



Job Time Recorder



Program Instrument

Citizens from Aliens

THE Americanization Committee of the Board of Commerce, of Detroit, has engaged Charles R. Thompson, formerly a federal naturalization official, to aid alien employees in industry in Detroit and its vicinity in their preparation to become citizens of the United States. The board has also decided to finance a plan to carry its Americanization scheme into the shops. It is interesting to note that, out of 168 applicants at one of the recent court hearings for citizenship held in Detroit, only 75 could pass the simplest examination in history and civics and win the certificate of naturalization. This proved to the committee the need for special instructions for foreigners desiring to become citizens. The Detroit Board of Commerce is out to make the city 100 per cent American, and industry 100 per cent loyal.

New Orleans Clears Her Streets

THE removal of advertising signs and fruit stands from the streets of New Orleans has greatly enhanced the city's appearance. This was accomplished by the enforcement of an old ordinance prohibiting sidewalk obstructions. The city is crowded, and all of the released room is needed by pedestrians. The Municipal Cooperation Committee of the Civic Bureau was instrumental in having this ordinance revived.

To Improve Cable Service

THE Association of Commerce, of New Orleans, has begun an investigation of the cable service in that city, and again is asking its membership for specific complaints upon which to proceed. This method was followed with good result in seeking better express service and improvements of the mails. In this instance, the trouble is blamed on the cable companies operating out of New York. New Orleans merchants already have shown that the service from New Orleans to Cuba and Porto Rico is entirely too slow and too clumsy.

A Bridge to Cross the Delaware

NOW that it is finally assured that Pennsylvania will meet New Jersey half-way on the proposition to build the Delaware River Bridge, the committee of the Chamber of Commerce of Camden, N. J., which has been working on this project for years, has every reason to feel proud of the success that has attended its efforts. The next question to be considered is where the bridge will be built. Philadelphia is viewing the matter and studying the situation on that side of the river, and the Directors of the Camden Chamber are trying to decide upon a location on the Camden side. A special committee has been named to decide upon a site.

More Houses for Chicago

CHICAGO is to have a housing corporation to be organized by the Association of Commerce of that city and the real estate boards. At a recent meeting of men interested in this project, the following resolution was adopted:

"Resolved, That it is the sense of this conference that an effort should be made at this time to form a housing corporation, and that the Chicago Association of Commerce, the Chicago Real Estate Board and the Cook County Real Estate Board be asked to cooperate by assisting in preliminary finance, giving their public endorsement of the move, and assist in securing the financial backing of the larger industries."



Why take the chance?

Almost any little check you write for \$5 or \$10 with pen or typewriter can be multiplied by hundreds or by thousands with a drop of acid or one or two pen strokes.

It makes little difference how carefully you write, or what kind of ink or paper you use, almost any unprotected check can easily be raised without leaving a trace.

Protect yourself with the modern

TODD

Protectograph System

(TRADEMARK REGISTERED)

EXACTLY FIFTY ONE DOLLARS SIX CENTS

The new "Exactly" Protectograph Check Writer with Speed-up Dial "Shreds" each word indelibly through the paper; Denominations always in Black; Amount words Red.)

Todd-Protectograph System takes the chance out of issuing checks. It protects *all* of the check: (1) Against change of rightful payee's name. (2) Against forgery or duplication of your check form. (3) Against change of amount. The Todd System, now, makes checks *like money*. Ask for samples and prices of PROTOD forgery-proof checks, safeguarded and registered like banknotes.



Protectograph
Check Writer—
Todd 2-Color Patents

There's a little book written in State Prison by a famous check raiser which we will send (confidentially) to responsible business men who enclose their business letterhead. Shows exactly how business firms are swindled daily.

TODD PROTECTOGRAPH CO.
(Established 1899)

World's Largest Makers of Checks and Check-Protecting Devices

1174 University Avenue, Rochester, N. Y.

"Scratcher" The Forger

His Book

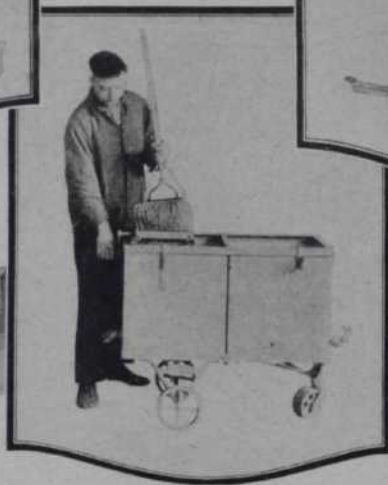
(Written in State Prison)

FREE, please send the "Scratcher" book by a famous forger, describing the temptations of unprotected checks.

Name _____

(enclose your business card or letterhead)

TODD PROTECTOGRAPH CO., Rochester, N. Y.
N. E. - 6-20



In panel at left—Finnell Scrubber; at right—Finnell Water Absorber; in center—Finnell Mop Truck. These constitute a working unit, and are made in various sizes to meet other requirements. There is a Finnell outfit suitable for any kind or size of floor.



SAVING \$12,000.00 A YEAR

By Scrubbing Floors Clean

Because they realized that cleanliness is necessary to efficiency,

—and because they knew that *hand and knee* scrubbing and ordinary mopping are not competent methods,

—a large well known concern installed a set of Finnell scrubbing equipment.

In one year they saved nearly \$3,000.00. Pleased with the results they purchased two additional sets. These brought their total annual savings up to \$12,000.00.

This sum represents only the saving in labor and materials. The effect upon the morale of the employees is beyond reckoning in dollars and cents.

The reduction in spoilage of merchandise and the lower list of accidents are alone well worth the investment.

The representative nearest you will be glad to explain the value of the Finnell System in your business. No obligation if you write for information.

American Scrubbing Equipment Company

General Offices: 182 N. Wabash Ave., Chicago. Factories: Hannibal, Mo.
District Representatives in Principal Cities

"The Clean Shop
gets the
Clean Workers"

FINNELL SYSTEM
OF POWER SCRUBBING

100%
CLEAN

The Common Duty

Business men will meet to decide upon means of supplying the universal need of harder work and greater production

By JOYCE O'HARA

A NATIONAL PROGRAM for stimulating production as a means of insuring stable financial and business conditions will be put forward at the Eighth Annual Meeting of the Chamber of Commerce of the United States, to be held at Atlantic City, from the twenty-sixth to the twenty-ninth of April.

This meeting has been designated an Increased Production Convention. It will bring together representatives of the more than 1,300 commercial and industrial bodies composing the National Chamber's membership, for a thorough discussion of means of increasing output to meet the universal demand for goods.

The world problem today is production. Even in the United States, where the national life was little disturbed by the war in comparison with less fortunate countries, increased production is necessary for the solution of great problems.

The duty of America is to produce. The responsibility lies on all alike, the manufacturer, the merchant, the farmer, the worker. The contribution of each of these will be laid before the meeting for use in preparation of the program of increase production.

Increased production means a larger share of the necessities and comforts of life for our own people; it means more for Europe, where people are dying for lack of food and clothes. In it lies the only means of making up the wastage of war. Work alone offers a cure for many of the ills left by the conflict.

The general subject of increased production has been divided up in the program for the convention into sub-subjects. The first to be considered will be the government in relation to production. Taxation and anti-trust laws will be taken up under this heading. Both of these topics are of vital interest to the American business man, especially the matter of excess profit tax against which there has been general complaint.

Transportation in relation to production is the second general subject. Under this heading are railroads and merchant marine, two vital factors in the scheme of production and distribution. It has been authoritatively estimated that the railroads of the country are short at least 200,000 box cars, and all lines of industry have felt the shortage. With the railroad back in the hands of the private owners, there seems to be a concerted movement being made to remedy this condition. Railroad men will tell the convention what is being done along this line. Our merchant marine policy will be considered from the standpoint of its relation to production.

Another important general subject will be international finance in relation to production. As things stand now, we must not only finance our own requirements, many of which are larger than usual because of development and expansion of industry during the war, but also finance a part of Europe's requirement. Raw materials and finance are the two dominant things that are needed to put European industries back on their feet again.

Many prominent financiers will be heard at the convention on the subject of world finance. They will point out that for more

than four years the leading countries of the world have been living on borrowed money, and many years of saving will be needed to restore these countries to normal conditions. Even Bolshevik Russia, after wrecking capital and industry, is now coming forward for recognition and for a loan.

Next to labor and agriculture, finance is the most important item in production. When we turned from war to the pursuit of peace in 1918, we found ourselves in a different situation in world affairs to that we occupied in prewar times. Instead of being a debtor nation, supplying large quantities of war materials, and importing many of our manufactured wares, we opened our books to find that the leading countries of Europe owed us money and we were selling billions of dollars worth of finished products in the countries which before the war supplied us with many of these goods.

As the war has reversed the trade situation between Europe and the United States, we must be prepared to extend credit to European buyers or else suffer a curtailment of our foreign trade. This is one of the vital questions that will have the serious thought of the convention. This unbalanced trade situation must be adjusted before increased production can be expected to give us lower prices.

A Main Topic

THE subject of agriculture is given a prominent place on the program. In fact, one whole session of the convention will be given over to a discussion of "Agriculture in Relation to Production."

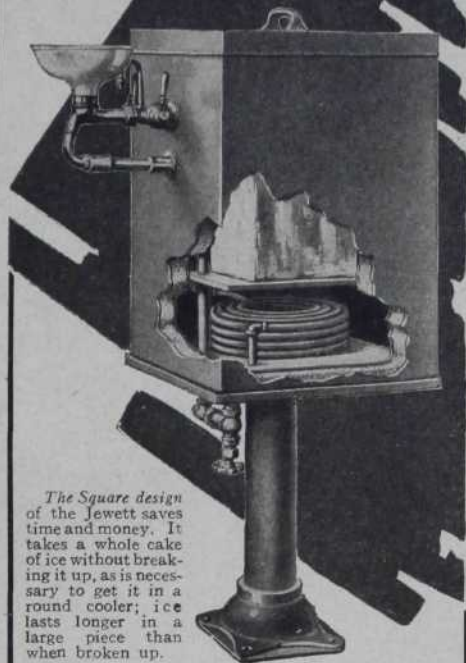
Honorable Edwin T. Meredith, Secretary of Agriculture, will be the chief speaker at the session on agricultural production. He will present "The Government's Part." The prominence that is given in the convention to agriculture is taken as an indication of a growing realization of the importance of the farm as a factor in the nation's business life and of the farmer's work as a business. It is pointed out that one-third of the people of the country are producers of the soil. Farming as a business is one of the largest industries in the country. One of the corollary phases of agriculture is distribution of farm products, and high prices of foodstuffs is blamed in a measure upon our inefficient distribution.

Under the all-important general subject of "Labor in Relation to Production" will be discussed the laborer's viewpoint by a representative of the American Federation of Labor and the employer's by a business man.

Besides the general sessions there will be group meetings divided according to the great divisions of industry. These group meetings will discuss the subject of stimulated production from the angle of their particular division of business.

Reports received at the headquarters of the National Chamber of Commerce at Washington indicate that the subject of increased production is the one uppermost in the minds of the American business men. They realize that if something can be done to bring relief from the present high prices, much of the social unrest in the United States will disappear. They rest their hopes on increased production.

(Continued on page 95)



The Square design of the Jewett saves time and money. It takes a whole cake of ice without breaking it up, as is necessary to get it in a round cooler; ice lasts longer in a large piece than when broken up.

Help Your Men To Do More Work in Summer

The best antidote for the summer production slump is nature's own remedy—palatable, refreshing water at the proper, thirst-quenching temperature. Undoubtedly you are supplying your men with drinking water now. But are you doing it efficiently? The best method is by means of

Jewett Water Coolers

Every way you figure it, Jewett coolers are most efficient. The all-cork insulation (1½ inches thick) makes the Jewett cold-tight. A greater cooling capacity makes possible a plentiful supply of revivifying, ice-cooled water regardless of how many men drink from the cooler.

The Jewett connects direct to the main water supply. It is useful all year. In the winter time no ice is needed. Jewett coolers are sanitary and furnish water at just the right temperature to satisfy thirst. Our folders give valuable information for executives who are interested in keeping their employees healthy and satisfied.

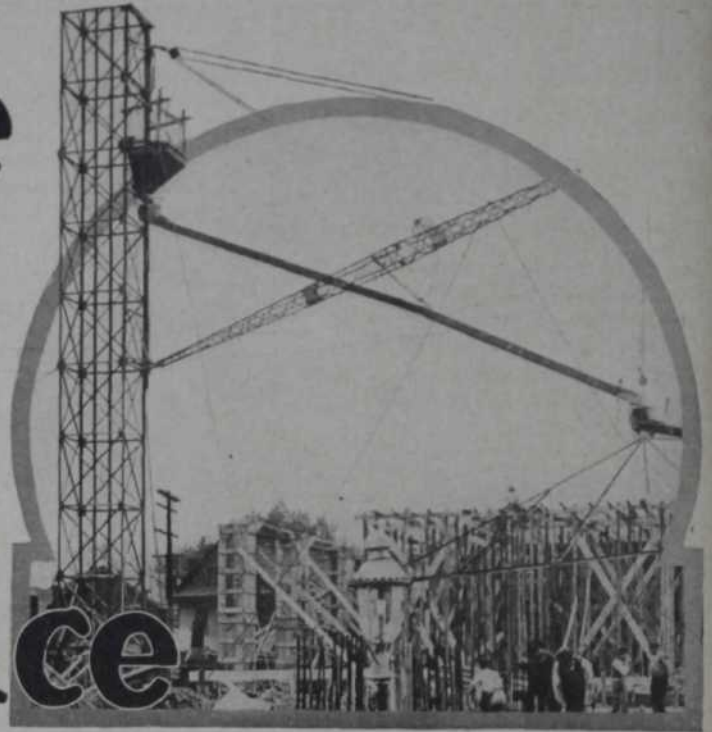
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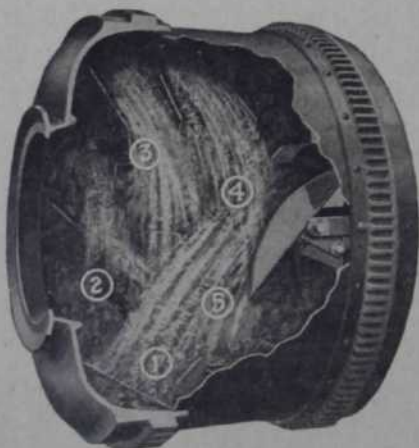


Concrete—fluid rock—is handled by methods that give greatest speed to construction. Well mixed, it “*sets*” as solid as the rock of the everlasting hills—holds back the mighty pressure of the world’s greatest dams—bridges the world’s rivers—builds roads for the traffic of the world—houses the world’s industry. It is the living rock serving civilization’s greatest and humblest needs.

Koehring-mixed concrete is dominant strength concrete because the Koehring *re-mixing* action delivers a uniform distribution of stone, sand and cement to every cubic foot of construction.

Koehring-equipped contractors deserve recognition for the use of the mixer that delivers dominant strength concrete.

Write for Van Vleck’s book, “Standardized Concrete”



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Concrete Mixers standardize concrete

KOEHRING MACHINE COMPANY, Milwaukee, Wisconsin

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Today the type of investment bond which has been developed under the *Straus Plan* stands as the standard safe 6% investment of the nation. This merited place has been gained and has been held by these bonds because—

- They are intrinsically safe;
- They pay the attractive rate of 6%;
- They have never known a failure of prompt payment in both interest and principal on the day due;
- They offer complete freedom from care, responsibility and management;
- They are not affected by market fluctuations or manipulation;
- They are exceptionally free from the effects of labor troubles, economic changes and governmental regulation;
- They afford opportunity for the widest diversification, as well as choice of maturity dates;
- They are backed by the thorough-going service of a completely equipped, nation-wide organization.

These securities—sound first mortgage serial coupon bonds, netting 6% with 4% Federal Income Tax paid—will give you the same satisfaction and safety that they are giving today to tens of thousands of well-pleased customers throughout the country. Our booklet, "Safety and 6%", will tell you why. Write for it today. Ask for—

BOOKLET E-1025

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& Co.**

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Buffalo Los Angeles Pittsburgh
38 Years Without Loss to Any Investor

Edward A. Filene, president of the William Filene's Sons Company, one of the largest department stores in Boston, writes the National Chamber, heartily endorsing the purpose of the convention. He says that four years of the greatest destruction the world has ever seen can be made good only by at least four years of intensive production.

"Increased production in the United States" he says, "means not only increased wealth for all of us but also a method of helping to save Europe from serious social danger. Increased production will not come by merely wishing for it. If it comes at all it will come by reason of better labor relations, brought about, possibly, by shop committees, stock ownership by employees, profit sharing, good housing and working conditions, health protection, good recreation facilities, and sickness and old age insurance.

"This means that business men must give careful study to making the pay envelope contain real wages. No wages are real that will not buy a sufficiency of food, clothing, shelter recreation and provision for illness and old age. A just wage by the employer can be made unjust by speculators and profiteers in the necessities of life. If we are to have increased production we must have happy, unharassed workmen. If we are to have increased wages we employers must think not in terms alone of dollars, but also in terms of the dollar's purchasing power. Business men must become interested and must promote cooperative movements. Cooperative stores, cooperative housing associations, cooperative savings organizations and the like will decrease cost to the workmen."

The World Needs a Tonic

CHARLES A. OTIS, a member of the investment banking firm of Otis & Company, Cleveland, gives his earnest approval to the object of the convention when he says that "the world needs a tonic of 'Greater Production.' A nation prospers only as it produces more than it consumes. So with the individual. He prospers only as he earns more than he spends. This principle is basic, and its non-operation can only be temporary. The war period has been one where this principle did not operate, governmental necessities requiring arbitrary control of many things. But no enduring prosperity will come until all of that disappears and we all get down to the old point where industry alone counts.

"The practical application of these principles has resulted in an evolution that had gradually been benefiting humanity, and in again getting back to normal we may find that this normal has moved up a few notches, with the result that labor will be given a relatively higher value than it previously occupied. The great trouble with most socialistic reformers is that they want a revolution in this relation, and are not willing to have it improved by gradual steps of evolution, which has been and is the fundamental underlying principle of life in this world."

In speaking of the coming convention, H. B. Anderson, president of the Anderson-Tully Company, manufacturers of hardwood packing boxes of Memphis, Tenn., expressed the belief that so long as there is disorder in Europe there will be unsettled conditions in the United States. He said that "in addition to the labor problem, which is very acute, Europe has an additional problem before it of securing raw material on which to work. Its labor problem will be settled by itself—we have nothing to do with this. But we must help them get raw materials.

(Continued on page 97)

The Effective Population of This Country Today Is Only 50,000,000

THE other half of the men, women and children who should—and could—be helping to make this the most efficient of nations are handicapped by CONSTIPATION.

Three-fourths of the disease which keeps our people bed-bound or debilitated to the point of dependence on others is caused or intensified by this commonest of complaints, which the average sufferer permits to exist because it doesn't throw him into a sudden fever or send him at once to bed.

There is no more excuse for this condition of affairs than there would be for 50,000,000 Americans crawling on all-fours to work this morning.

With NUJOL obtainable in any drugstore, the curse of Constipation is as unnecessary as the fifth wheel to a cart.

You get NUJOL at a drugstore, but it is not a drug. It is not even a medicine, in the accepted sense of the word.

It is simply a clear, odorless, tasteless product, as harmless as pure water, and passes through the body without being absorbed in any measure by any cell or tissue. NUJOL softens the hardened mass in the intestines and smooths the way for its prompt and comfortable elimination in the way Nature intends. It does this without pain or griping. It does not interfere with digestion. It has no more effect on the stomach or the organs of absorption than a ring worn on the finger would have. Because of the pleasant manner in which it has relieved thousands, it is generally regarded as the first line of defense in Sickness Prevention.

Nujol
For Constipation



"THE SWITCH"

By HOWARD FURNESS, with Bethel
Maine R. R., Bethel, Del.

Two years ago as superintendent of the machinery of a local shipbuilding plant I happened to be near a bunch of men facing a large rip-saw belt. This was almost finished and all the men had gotten down from the shaft above with the exception of one who remained there a minute to tighten a set screw in the operating pulley. He had almost finished this when, slightly changing his position on the shaft, his foot accidentally knocked the switch on, which started the shaft turning, which threw him against the pulley, catching his arm between the pulley and the belt. He was thrown over once this way and when the pulley had made one revolution his arm was loosened and he dropped down on the saw which by this time had gained very great speed. One of his arms was sawed off and he was sawed half way through his back when pulled away from the saw. He died on the way to a hospital.



Must we learn from dying men— —the deadly menace of the exposed knife switch?

HE was up over a saw, tightening a pulley. His foot slipped, kicked shut the exposed knife switch.

The power was on! Whir-r-r—went the machinery, up flew his body around the pulley, and then down . . . the whizzing saw below . . . well, after that moment nothing any man on this earth could do would help the lifeless, mutilated body.

Must we learn, from such tragic lessons, the danger, the constant deadly menace, of the exposed knife switch?

From all over the land protest is going up

From everywhere an outcry, in ever-increasing intensity, is heard against the needless waste of life and property caused by the exposed knife switch.

Fire marshals are ruling against it; safety officials are branding it as dangerous; labor unions are denouncing it; electrical societies are condemning it; architects and contractors are blacklisting it; from every side comes the demand from authorities—the knife switch must go.

"The loss of life and property due to defective electric installations every year," says John G. Gamber, State Fire Marshal of Illinois, "is beyond reason . . . My department has issued a general order requiring that all knife switches, other than those on switchboards, must be of the approved safety enclosed type."

The Western Association of Electrical Inspectors, in convention at St. Louis January 27, 28 and 29, 1920, went on record without a dissenting vote as being in favor of the use of enclosed switches.

"The exposed knife switch," says John A. Hoeveler, Electrical Engineer, Industrial Commission of Wisconsin, "is the most common unguarded source of electrical trouble in factories. The worker is always in danger of shocks and burns by contact."

The Square D Safety Switch

The Square D Safety Switch is an absolute safeguard against shock, fire, and industrial accident of any kind.

It is a simple knife switch in a pressed steel housing—externally operated. A handle on the outside does all the work.

Current cannot reach that handle, nor the box itself—tough, rugged insulation completely isolates all live parts. They are safely enclosed within steel walls.

The switch may be locked in the open position, too, while work is being done on the line; nobody can thoughtlessly turn on the current. This feature is saving many an electrician's life. "On" and "Off" positions are clearly indicated. The Square D Safety Switch is made in over 300 sizes, types, and

capacities—for factories, office buildings and homes.

The greatest remaining hazard around an electrical installation—the exposed knife switch—is going. All over the country progressive firms—leaders both in employees' welfare and in efficient production—are safeguarding the lives of their workmen and their property by replacing all old-style exposed knife switches with Square D Safety Switches. Prominent among them are:

The United States Steel Corporation
Pennsylvania Railroad
Standard Oil Company
Pullman Company
Ford Motor Company
The B. F. Goodrich Rubber Co.
U. S. Shipping Board
General Motors Corporation
Bethlehem Steel Company
The White Company

Listed as standard for both fire and accident prevention by the Underwriters' Laboratories of the National Board of Fire Underwriters. Meets the requirements of the National Electrical Safety Code of the Bureau of Standards, Department of Commerce, Washington, D. C.

The Square D Safety Switch is sold and installed by your electrical dealer and contractor. Architects and engineers are listing it as standard equipment. Ask any of them for further information—or write us direct.

Act NOW and protect your workmen, your family and your property against fire, shocks and other electrical hazards. SQUARE D COMPANY, 1400 Rivard Street, Detroit, Michigan. Canadian Branch: Walkerville, Ontario.



The dangerous exposed knife switch



The Square D Safety Switch

W. L. Clause, president of the Pittsburgh Plate Glass Company, Pittsburgh, Pa., places much hope in the Increased Production Convention. He is of the opinion that increasing wages to meet the high cost of necessities and a dog chasing its tail are in the same category. He says: "Seeing the shop windows well stocked with goods the public is easily deceived about this shortage, but that is because prices are so high that many people cannot afford to buy. Even at that, however, ask any shop-keeper and he will tell you that the demand is greater than the supply. Furthermore, when we speak of necessities most of us speak only of food, clothing and things of daily consumption, overlooking the fact that houses, railroad engines, cars, factories and machinery to provide these daily necessities must be built before we can secure them. And here is where the greatest need for increased production lies."

"The worst thing about it is that most people have fallaciously acted upon the theory that if they could only increase their wages enough that would solve the H. C. of L. for them. This theory is very unsound, since high wages do not mean very much if prices increase beyond the increase of wages. As soon as people realize this, more progress will be gained in the fight upon high prices."

In a statement supporting the big idea of the convention, James R. MacColl, treasurer of the Lorraine Manufacturing Company, Pawtucket, Rhode Island, says that the war is not entirely to blame for the present relation of production to consumption. "It is true," he says, "that factories, mines and fields have been devastated, transportation has been badly crippled, and millions of men have been removed from industry. But it is also a fact that hours of work have been deliberately reduced, labor unions have encouraged and forced limited output, and there is a world-wide disinclination to strenuous toil. It seems, for the moment, easier to add to earnings by an increase of the wage rate rather than by larger production. The former fails in its purpose, because it simultaneously increases the cost of living."

Work Is No Disgrace

THE world needs today a new consecration to work, a sounder philosophy regarding the dignity and happiness of toil, and a better understanding of fundamental economics in relation to earnings and their value.

"Following four years of destruction and reckless expenditure with consequent enormous indebtedness, the impoverished nations should work harder and save more than ever before. Reduction of hours of labor and restriction of output would only be justified when production had outstripped demand. For many products, this condition might not occur for several years. There is need of a widespread realization of the splendid opportunity now afforded to save and thus secure comfort and safety when the inevitable period of depression and lack of employment comes."

Henry M. Victor, president of the Union National Bank, of Charlotte, N. C., discusses the financial side of the convention in a letter to the National Chamber. He says that the only cure for the abnormal conditions that have grown out of the great war is for each person to produce or help to produce his share of the world's needs. According to him, the high cost of living can only be overcome by increased production.

The outcome of the convention will be awaited with keen interest by the country's business men who hope that the meeting will evolve some definite plan to stabilize industry and speed up production.

GET OUT YOUR REPORTS ON TIME!

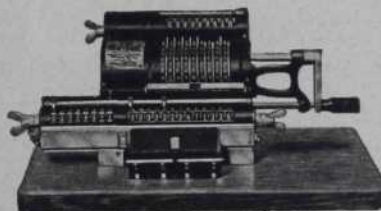
REPORTS

GOTTEN OUT ON TIME ARE MORE EFFECTIVE THAN LATE REPORTS. BUSINESS EXECUTIVES DISLIKE ABSTRACTS EITHER FOR THEMSELVES OR FOR THE BOARD OF DIRECTORS. WHEN A BUSINESS EXECUTIVE APPEARS BEFORE A BOARD HE WANTS HIS REPORTS IN SUCH SHAPE THAT WHEN HE PRESENTS THEM NO APOLOGIES ARE NECESSARY

THE MARCHANT CALCULATOR HAS NO EQUAL IN GETTING OUT REPORTS ACCURATELY AND ON TIME. IT FIGURES EVERYTHING. DIVIDES. MULTIPLIES. SUBTRACTS AND ADDS.

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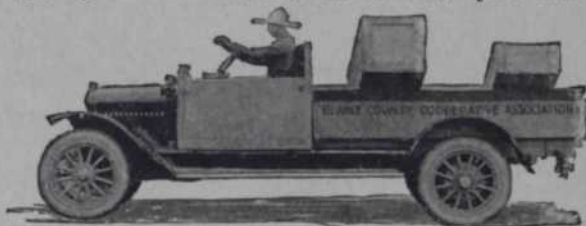
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SEND ME
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MANUAL FOR
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EXECUTIVES
S-4.

Building The Right Sized Trucks To Fit Each Transportation Requirement

By George A. Kissel

Experience has proven that a motor truck to be operated economically and efficiently must, above everything else, fit the purpose for which it is to be used. A misfit truck means not only high upkeep, but an investment that will prove a liability, because either too much ability will be expected or too little service will be realized. In the first instance, the overload will produce premature depreciation and big repair expense; in the second instance, you are paying for excess capacity not utilized.



Kissel "General Delivery" Model

The Results of Buying Adaptable Units

By purchasing truck units of the proper size and capacity for your requirements, the following advantages will result—

- 1—Lowest cost per ton mile.
- 2—Low gasoline and oil consumption.
- 3—Minimum wear on tires.
- 4—Maximum power at minimum expense.
- 5—Most efficient operation of all fixed or moving units.
- 6—Minimized wear and depreciation.
- 7—Big saving in time and labor.
- 8—Elimination of breaks or overstrain.
- 9—Lowest service expense.
- 10—Small capital invested in parts stock.

The fact that the Kissel Motor Car



Kissel "General Utility" Model

Company builds five different sized trucks, from the "General Delivery" $\frac{3}{4}$ to 1 ton to the "Goliath" 5-ton model, insures a truck for every purpose, a size for every business, and that is why fleet owners are standardizing their equipment with Kissel Trucks.

In other words—it is just as necessary to standardize on the proper size model as it is to standardize on one make. Therefore fleet owners realize that different sized models of the same make is the height of fleet efficiency and economy.

Way back in 1906 we realized the necessity of building the proper size trucks

to fit the purpose for which they were purchased. To do this successfully our designers and engineers studied the different requirements each line of business would demand.

A Size for Every Purpose

No matter what transportation demands and problems you are up against, your nearest Kissel dealer can supply you with the proper size Kissel Truck that will economically and efficiently meet your transportation demands as if that truck were built to your own specifications.

"General Delivery" model, (capacity 2250 lbs. including body)—for retailers and merchants who want a quick delivery truck for speedy work in city and suburban districts—for manufacturers and wholesalers who want a light truck as auxiliary to their heavier models—for farmers who want a reliable light delivery truck equipped with a good loading space and ability to carry loads at a good rate of speed.

"General Utility" model, (capacity 4000 lbs. including body) built for retail lumber, furniture, hardware, soft drinks, department and similar stores, and delivery of freight, farm products, dairy and milk products. Adaptable for passenger and depot busses, drayage and transfer systems.

"Freighter" model (capacity 5200 lbs. including body)—the masterpiece of the 2-ton field that comes nearer in performance and ability to the 2-ton U. S. Army "A" truck than any other 2-ton truck on the market. The ideal truck for transport-

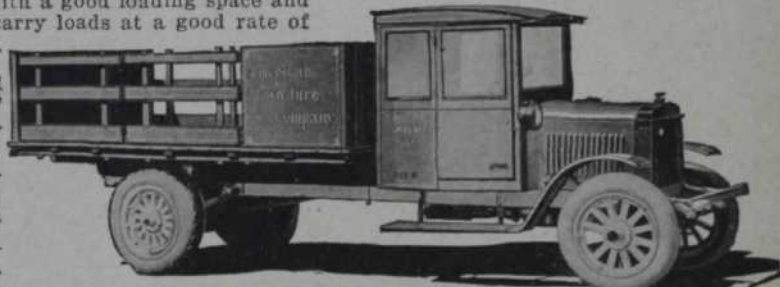
tation and express companies, rural motor express, roadbuilders, contractors, excavators, municipal work, farmers, manufacturers, wholesalers, coal and wood dealers, etc.

"Heavy Duty" model (capacity 8600 lbs. including body)—for contractors, road builders, express and moving companies that specialize on heavy haulage; is particularly suitable for hauling of lumber, stone, brick, machinery, gravel, cement, materials for street, sprinkling, flushing and oiling.

"Goliath" model (capacity 11800 lbs. including body). A brute for heavy work, a giant in power and strength when tons of dead weight are to be transported and delivered short or long distances over all kinds of roads and up different grades—strong and capable for any emergency or the heaviest load.

Uninterrupted Transportation This Winter

To insure Uninterrupted Transportation the year around, the ALL-YEAR Cab for Kissel Trucks was originated,



Kissel "Freighter" Model

perfected and patented. By adding the winter attachments—side door and window attachments, the open cab—standard equipment on the four largest Kissel models,—is quickly changed to an enclosed cab, warm, dry and comfortable—giving complete protection to drivers in the most severe winter weather—eliminating layups on account of storms and increasing efficiency of drivers.

The nearest Kissel dealer will study your transportation requirements to insure your getting the right sized Kissel Truck, reducing your transportation expenses to the proper ratio of goods hauled and miles covered. Specifications, price, etc., sent on request. Kissel Motor Car Co., Hartford, Wis. U. S. A.



Kissel "Heavy Duty" Model

DURAND STEEL LOCKERS



COULD you play as good a game of golf if you were worrying about the security of the clothes you left in the locker room?

Can your employes do as good a day's work without steel lockers for the safety of their clothes and property?

Give them Durand Steel Lockers. It's good business.

*We make also Steel Racks,
Bins and Shelving. Catalogues on request.*

DURAND STEEL LOCKER CO.
1511 Ft. Dearborn Bank Bldg. Chicago
511 Park Row Bldg. New York

A Reply to the Motor Truck

MR. HARLOW C. CLARK, editor of *Aera*, the publication of the American Electric Railway Association, read with a great deal of interest the story in the March issue of *THE NATION'S BUSINESS* which set forth the claims of the motor truck as a substitute for the street car. His reply to the conclusions gives the other side of the question so clearly that we believe our readers should see it. Mr. Clark's letter follows:

"My attention has been called to an article by Mr. R. E. Fulton, appearing on page 38 of the March issue of *THE NATION'S BUSINESS*, with the caption: 'Watch Your Step, Street Car.'

"Mr. Fulton disposes of the electric car as a means of local transportation in a manner which could, perhaps, be described as 'casual.' He says that present lines, in many instances, have reached the limit of their carrying capacity; that no new lines can be built; that the motor 'bus could be operated at a lower cost, and that congestion will be reduced if motor 'buses are substituted for street cars.

"In some of his conclusions Mr. Fulton differs with his fellow-motor-promoter, Mr. Henry Ford; in others, he differs with actual experience, and in still others he departs from what common sense would seem to teach.

"For instance, Mr. Fulton would eliminate rails in city transportation. Mr. Henry Ford proposes to retain rails but to eliminate electricity as a motive power, and Mr. Ford's gasoline car, which is announced as the successor of the electric car, is built to run upon rails, and not upon rubber tires.

More Efficient

MR. FULTON declares that motor 'bus operation is more efficient and more economical than electric railway operation. Lack of experience in this country does not permit of comparisons, either as to cost or efficiency, although the experience of the 'bus lines of New York and Chicago, the largest in the country, which are transporting passengers at ten cents, may be considered as bearing upon the subject. However, the city of Sheffield, England, which operates its own tramway service and its own motor 'bus service, can be put upon the witness stand.

"In a paper read before the Municipal Tramways Association of the United Kingdom, September 18, 1919, Mr. A. R. Fernley, General Manager of the city-owned Sheffield Tramways and Motor 'Bus lines, gives some interesting comparisons, both as to expenditures and as to the relative efficiency of electric cars and motor 'buses covering a period ending March 25, 1919.

"As to expenses, Mr. Fernley says:

"1. The revenue expense of running motor 'bus is 44.5 per cent more than for tramcar. After giving the motor 'bus the benefit of its comparatively lower capital expenditures it still costs 33.7 per cent more than the tramcar to work per mile.

"2. The revenue expense per passenger carried on the motor omnibus is 198 per cent more than on the tramcar. The total expenses per passenger carried are 176 per cent more on the 'bus than on the tramcar.

"3. Again, per seat provided, the omnibus revenue expenses are 131.3 per cent higher than the tramcar revenue expenses. The total expenses per seat provided are 114.1 per cent higher on the 'bus than on the tramcar.

"4. The average speed of the 'bus is 9.97 miles per hour. The average speed of the tramcars is 8.65 miles per hour, that is, 15.26 per cent in favor of the 'bus.

THE
FIRST
NATIONAL BANK OF BOSTON

A Boston Account

Will be found very convenient and helpful for houses doing business with New England. An account with us will prove of the greatest value because we can furnish you with the most extensive and efficient service, not only in New England, but throughout the United States and in foreign countries.

Deposits - - - - - \$171,000,000
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Branch at
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As the Head of a Business You Vision—for Tomorrow

A sound organization—operating smoothly, under perfect control, and carried forward by a loyal and efficient personnel.

But Each Day the Absorbing Pressure of the Day's Routine

--and the lack of available technical assistance postpones your realization from month to month, and year to year.

We are prepared to place ourselves, individually or collectively, at the disposal of managers or owners who need temporary expert assistance in carrying out plans for improvement, large or small. We can give that concentrated attention, without which your objective will never be reached.

May we contribute from our broad experience as consultants in problems of management, organization, industrial relations, production, accounting, and office system. A thorough familiarity with the methods of large organization is at your disposal.

A frank statement of your individual problem is invited. We will gladly indicate to you our method of approach to their solution.

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CHICAGO

"As to the range of usefulness, Mr. Fernley's conclusions are that the motor omnibus 'so far as it has been developed up to date' is:

"1. An excellent vehicle in acting as a feeder of and in connecting up tramway routes and services.

"2. An unsuitable vehicle for satisfactory dealing with heavy town traffic.

"3. Quite inadequate for dealing with our peak loads.

"4. Financially impossible for workmen's traffic at reduced rates of fare.

"5. In regard to average speed maintained throughout the day, has no advantages over electric tramcar."

"Reflecting these conditions, it is interesting to note that the average fare charged per mile upon the Sheffield tramways is .652d, while the fare per mile charge on the motor 'bus is 1.5d. In other words, the 'bus fare is 130 per cent more than the tramway fare.

"Mr. Fulton declares that congestion of traffic is one of the main reasons why the motor 'bus will supplant the street car. Common sense finds it difficult to conceive how traffic congestion can be relieved by substituting, for vehicles with a large carrying capacity, vehicles having a smaller carrying capacity and thus increasing the number of vehicles upon the street.

"Toledo was twenty-seven days without electric railway transportation. During this period the motor vehicle had full opportunity to demonstrate its advantages. It failed to do so, and Toledo welcomed with open arms its trolley cars' return.

"Refused a moderate increase in its car fares, the Staten Island-Midland Railway abandoned service in the Borough of Richmond, New York, and municipal buses were substituted. Civic and business organizations of Staten Island are now demanding that the trolley cars be returned and be allowed whatever fare will cover their cost of service and operation.

"During the series of recent storms in greater New York, the motor busses ran only where the streets were made passable by the trolley car.

"The field of the motor 'bus and motor truck is so large that it would seem unnecessary to exceed its limitations in the propaganda of their promoters."

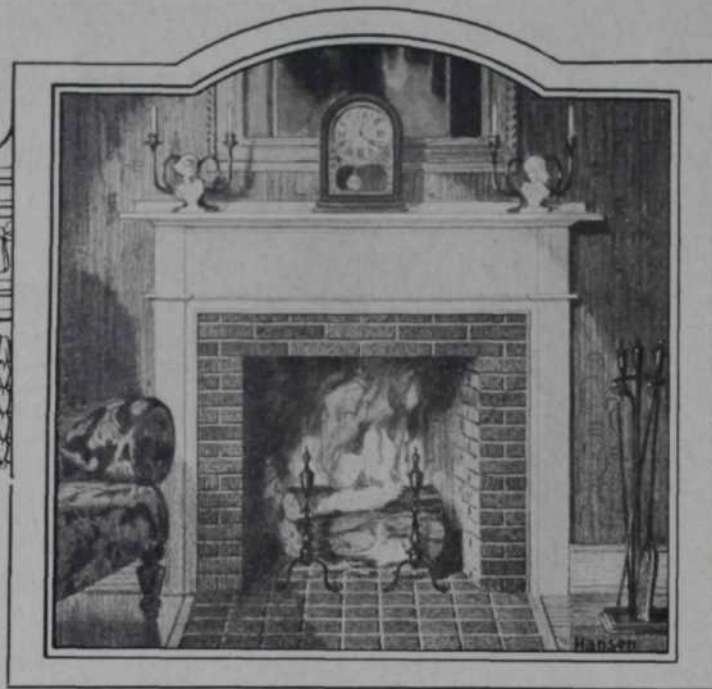
The Mutations of Fuel Control

FUEL CONTROL is somewhat like Finnegan's train. In any particular moment it may be a nice question if it is off again, on again, or gone again.

One change on April 1 was the dissolution of the executive order of last October restoring control of prices, which had ceased in the first two months of 1919. In other words, as the three members of the Bituminous Coal Commission did not arrive at a unanimous report, the President has not conferred on the commission power to fix prices but has relegated this power to the discard. At the same time he has reminded the coal industry of the anti-trust laws and of the requirement of the Lever Act that prices are to be reasonable.

The report of the majority of the commission the President referred to the coal operators and miners as a basis for their agreements as to wages, etc., during the two years to April 1, 1922. According to the report, there will be in the new year for bituminous coal, beginning on April 1, an increase in wages of \$96,000,000, and a total increase of \$200,000,000 if the increase made after the strike in November is counted. In December coal operators offered an increase





What Is Home Without a Fireplace?

Are you interested in a housing scheme for your employees? If so, why? Is it not because you want to provide them with homes that will make them happier and more contented workmen?

It is, therefore, simply good judgment to build houses that are fit to become homes. And what is it that makes a house a home? What, for example, is home without a fireplace? Around it centers the family circle and with it are associated the fondest memories of childhood.

The chimney piece pictured above will be as beautiful in some homes years hence as it is today. Set in the residence of one of your employees it will earn his respect for the company who selected it for him; it will help him make a happy home that he will be loath ever to leave.

But this mantel is only one of a hundred kin-

dred articles for individual homes shown in our portfolios, "Better Built Homes". In these appear many enduring, inexpensive dwellings in which are incorporated doors that say "Come in!", stairways that invite, bookcases, window seats and china cabinets that make the eye linger, and other woodwork, simple, sincere and beautiful, making a house homelike.

Curtis Woodwork is not a luxury, because it is produced in quantities at low cost. It is designed especially for us by Trowbridge and Ackerman, architects, of New York City, and every article is standardized. The beautiful mantel above and many other architectural details can be included in homes of modest price.

If you have a housing problem of any nature on your mind, write us now for information in regard to

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"The Permanent Furniture for Your Home"

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MANUFACTURING AND DISTRIBUTING PLANTS AT

Oklahoma City, Okla.	Detroit	Lincoln, Neb.	Sioux City, Iowa	Wausau, Wis.
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The makers of CURTIS Woodwork guarantee complete satisfaction to its users

"We're not satisfied unless you are"

1866
CURTIS

in wages amounting to \$150,000,000 a year upon condition they might increase the price of coal.

The effect of the Coal Commission's report and the President's action would seem to be tantamount to acceptance of that offer, with the amount raised by \$50,000,000. If the result were exactly reflected in the price of each of the 500,000,000 tons of bituminous coal which will probably be mined in the next twelve months, it would mean an average increase of 40 cents a ton over the price of coal last October. All of this advance, in the opinion of the commission, will not fall on the public, as competition will cause some of it to be absorbed by the companies, but apparently realization of the commission's expectation will have to await a return to normal railroad and other conditions that will permit competition in coal mining to come into play.

The majority and minority reports of the commission may have been irreconcilable, but they had some points in common. They agreed upon the increase in wage for miners paid by the ton, differing as to day wages. Both accepted eight hours instead of a shorter working day, but the minority member was willing to let the present working day stand only for one year. There was concurrence that the spring is the time when agreements between operators and miners should be renewed. At one stage the minority member seems to have been even more nearly in accord with the two majority members than appears in the final reports.

All Know the Remedy, But—

STABILIZATION of the coal-mining industry, according to the majority, is the solution of the basic problem in an industry which has a capacity for producing 700,000,000 tons a year with a market for about 500,000,000. To this difference, with its results in competition, is added a highly seasonal character, with concentrated demand in one part of the year, resulting in car shortages which limit production, and in spring and summer idle mines, idle cars, and idle miners.

With this seasonal characteristic the report would have the nation deal through cooperation. The Council of National Defense will seek to have the whole country converted to the practice of obtaining in the spring and summer its supply of coal for the following winter and place it in storage at the point of consumption. The Interstate Commerce Commission is asked to consider graduated seasonal freight rates for coal—lowest in spring and rising to a maximum in the late autumn. The Federal Reserve Board is requested to look with favor upon paper drawn against coal in storage. Federal agencies would be compelled to put into storage before July of each year at least enough coal to answer their needs for three months in the winter.

With reasonably continuous operation of coal-mining plants substituted for intermittent activity, the cost of production per ton would obviously be decreased, labor difficulties would become easier of solution, and the whole industry and all other industries for which it provides a necessity would benefit.

Here's Water Power!

BRAZIL is partly separated from Argentina by the Iguaçu River and this river plunges over a precipice 221 feet high, that of Niagara being 167 feet. The Iguaçu cataract is also two and one half times as wide as Niagara, and, to 100,000,000 tons of water that pass over Niagara in an hour, 140,000,000 pour over the falls of Iguaçu.



A National Investment Service

THROUGH the aid and co-operation of our correspondents we are enabled to offer an investment service national in scope.

We have the privilege of being connected by private wires with the following well-known firms having offices in various cities.

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A "Dead Engine" in the Warehouse District. Many a truck owner is surprised when he learns that 88.4 per cent of all "accidents" to the average truck can be predicted from its specifications and the parts from which it is assembled.

Has the American Business Man Time to Save Money

GENERAL SAM HOUSTON built an empire in the Southwest, simply by doing the *next thing* every day as it came along.

Reconstruction will probably have to be managed pretty much the same way—*producing* with one hand and *saving* with the other, day after day.

The Packard people do not pretend to authority on any subject except *transportation*. But they *can* show the American business man *records of savings in trucking costs*—10 per cent. in gasoline, 18 to 22 per cent. in time, up to 30 per cent. in ton-mile cost.

They can show him, too, how to apply the same methods to *his own business*.

PACKARD has done away with excess costs in gasoline, not only through the remarkable ability of the Packard Truck Engine, but especially by means of the Packard carbureter.

Here is a carbureter built especially to stand the vibration of a truck at work. The float feed positive and *precise*. The carbureter water-jacketed and mounted high up on the cylinder *bloc*; so that the gas is warmed by the motor, and fed to the engine ready to flash into power.

Packard does away with excess friction and oil wastage, by the precise and positive *alignment* of parts from end to end of transmission.

It saves oil again by the *close fitting* of pistons and rings—

and by preventing loss of oil through drip.

It saves tires by *distribution of load*, by the positive and uniform action of the clutch—in fact, by the engineering design of the whole Packard rear end.

Dynamometer tests on Packard Trucks show that the Packard delivers 86 per cent. of *Engine-power* to the rear wheels on *low gear*, and 94 per cent. on *high*.

YOU often hear it said that Americans are too busy *making money to save it*.

Yet business men who keep accurate cost figures on Packard, as compared with the average truck, *standardize on Packard*.

"Ask the Man Who Owns One"

PACKARD MOTOR CAR COMPANY, *Detroit*

Aladdin



“Aladdin Houses Are Better Adapted for Our Purpose”

—Hamilton-Carhartt Cotton Mills

Aladdin quickly solves the housing problems of large industrial plants. In the following letter from the Hamilton-Carhartt Cotton Mills is discernible evidence of Aladdin's mastery of industrial housing:

The Aladdin Company, Bay City, Michigan

Gentlemen: We are in receipt of your favor of February 7, and will say in reply that we will be very glad for you to use our name in any character of advertising your houses that you see fit, as we have done a good deal of advertising for you free of charge, and I have personally put a number of mills in touch with your concern, who, if they have not, very likely will in the near future take up with you the matter of industrial housing for their operatives.

It has been a great thing for us, being able to purchase these houses, as we were in bad shape for house room for our employees, and it was almost an impossibility to have cottages erected locally at a cost that the mill could afford, besides your houses being very much better adapted for our purpose than any we would have built for ourselves.

Yours very truly,

W. G. HENDERSON,

Vice-President and Gen. Mgr.

Hamilton-Carhartt Cotton Mills,
Detroit, Michigan.

Aladdin—

Houses your men well and quickly.

Saves 18% of the cost of lumber.

Saves 30% of the labor cost.

Reduces the skilled labor required.

Guarantees complete shipment of material.

Carries material for 1,000 houses in stock.

Ships from the nearest timber region.

Quotes definite prices on any order from one house up to a city of 3,000, including churches, schools, offices, water and sewage systems, electric plants, street and house lights, heating plants, street parks, trees, lawns, etc., complete.

Write, wire or phone for Aladdin catalog No. 1945.



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Industrial Housing

After the Civil War—the Railroads After the World War—the Motor Truck

SOMEONE has said "The advance of transportation is the advance of civilization itself."

After the upheaval of the Civil War, the railroads spanned the continent and drew it together.

Today, motor trucks are filling in the meshes in the network of railway lines. They are linking one community with another, farm with table, business with business.

Most of us will live to see all city deliveries and hauling done by motor truck. We shall see railway freight terminals moved far out from the center of cities. Horses will be ruled out of congested areas, because three hundred motor trucks can pass through a given street in the time required for only one hundred horse-drawn vehicles.

"The advance of transportation is the advance of civilization itself."

THE AUTOCAR COMPANY, Ardmore, Pa.

ESTABLISHED 1897

Manufacturers of the Autocar Motor Truck

Autocar

We shall see certain streets set aside solely for motor truck traffic, and special motor truck tunnels built under great cities and rivers.

We shall see hundreds of great new highways--broader, straighter, smoother and better built than any we now know--radiating from every city and crossing the continent in every direction.

We shall see million motor trucks running day night, on main trunk roads and branch lines, on regular schedules, under traffic control, with established loading and unloading stations.

We shall see the costs of distribution reduced, vast areas of land now idle tapped and developed, cities become less congested, less dangerous, cleaner and more beautiful, the remote districts made accessible, better to live in, more prosperous.